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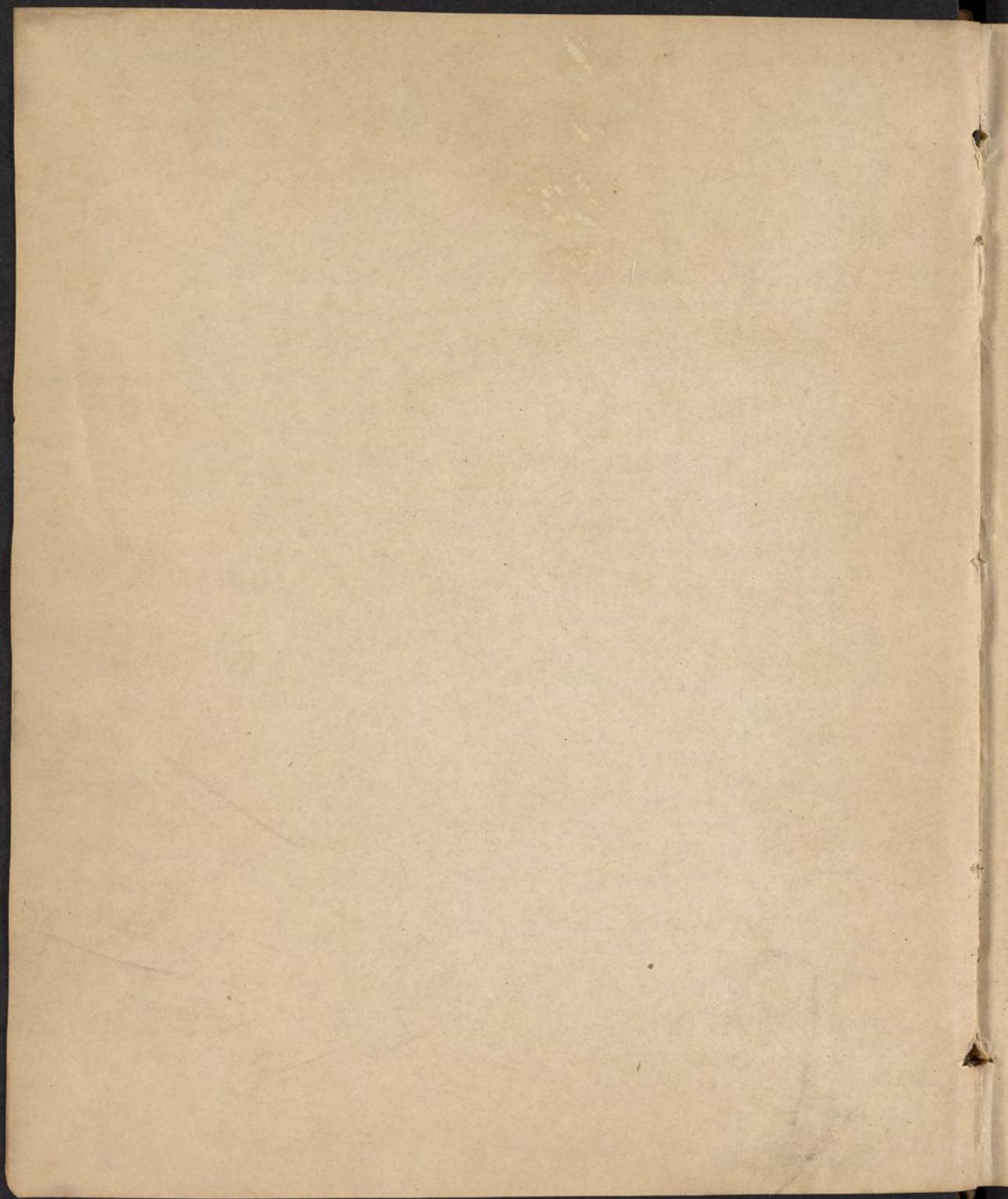
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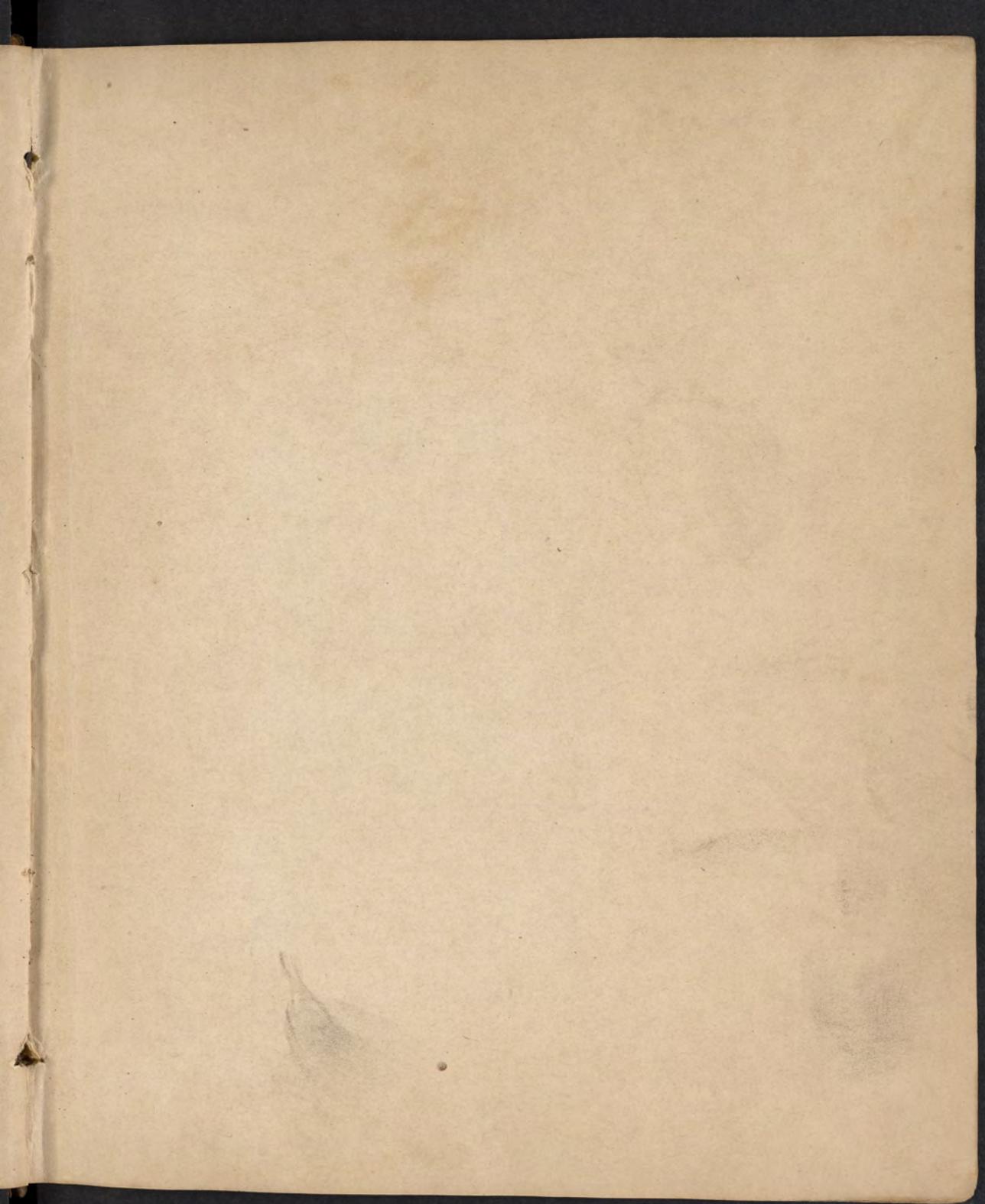
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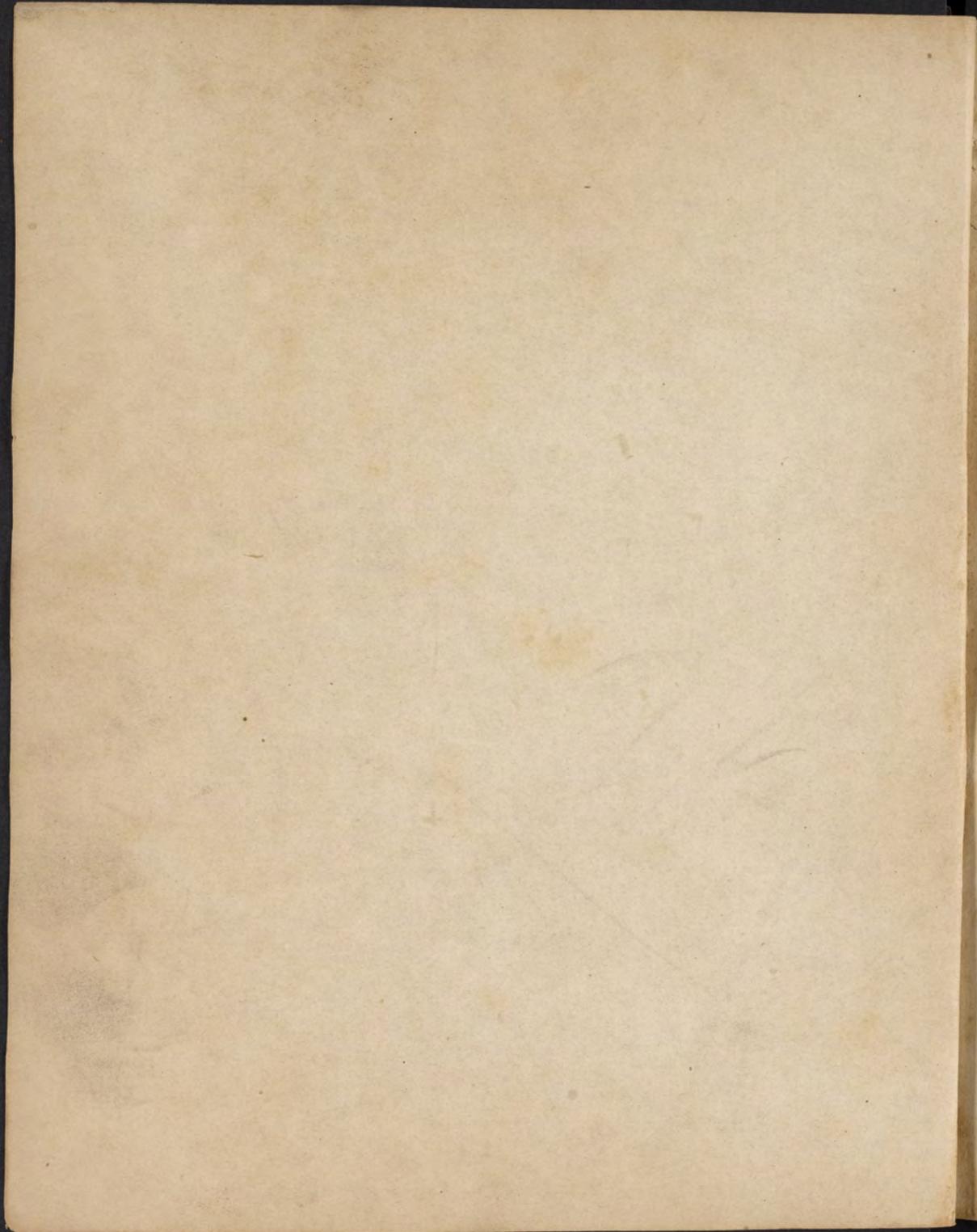
J. Barrach, M.D.

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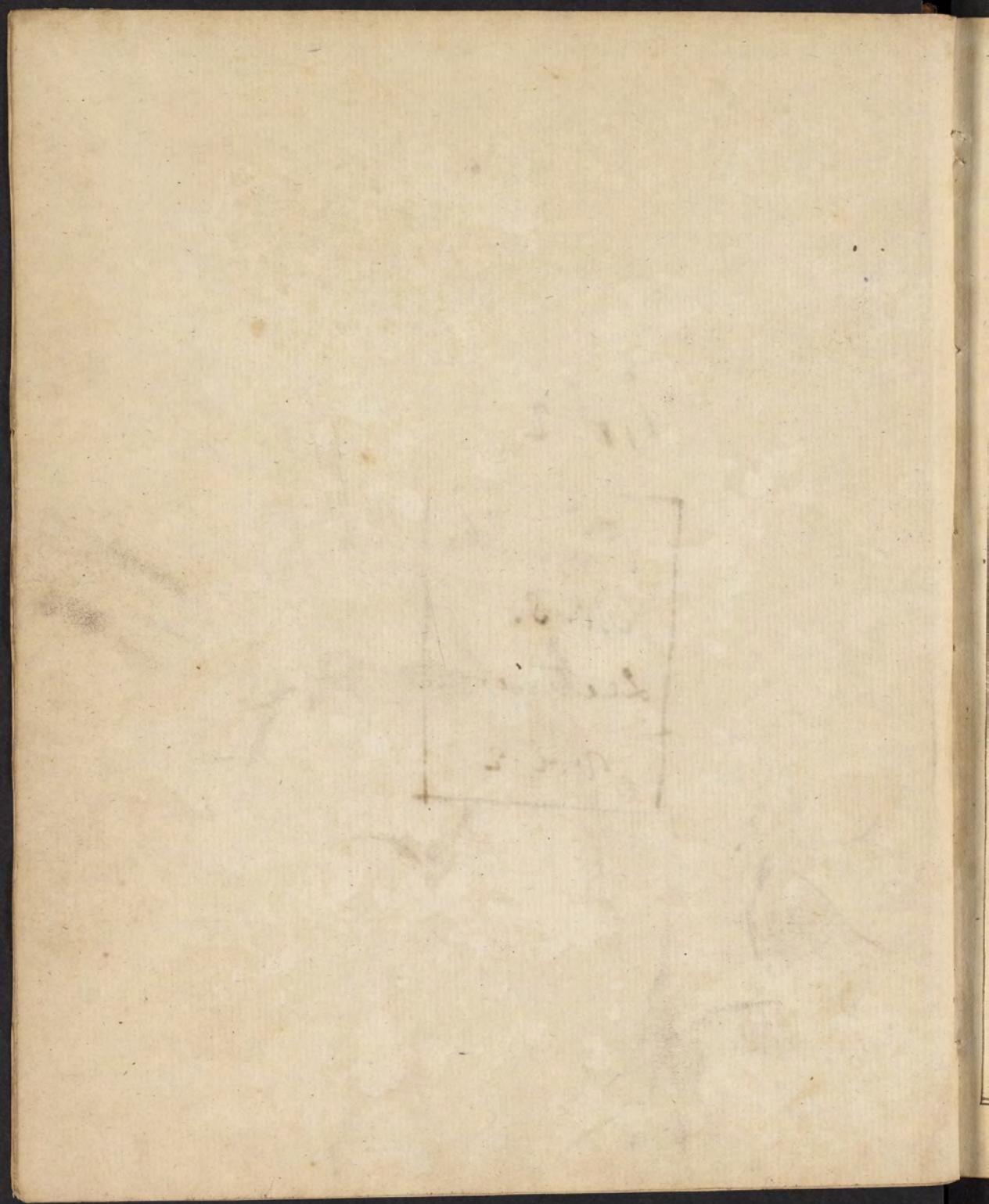






Vol 2

Physiks  
M. S.  
Lectures.  
Vol. 2



Notes

on

Surgery

from the

Lectures

of

Dr. Philip S. Physick

- Vol. 2<sup>nd</sup> -

БІБЛІОТЕКА  
ДО ЗОЛОТОГО  
ІМПЕРІАЛАРИ

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affected the movement of these bones, by means  
of the action of the middle fibres of the pec-  
toralis muscle. A patient came to St George's  
Hospital whilst I was there as ~~had~~ resident  
surgeon. He complained of pain at the  
heart bone. I examined it but could  
detect no fracture. To ascertain ~~certain~~  
the state of the case I requested the pa-  
tient to make apply his arms extended  
between my shoulders and to make  
pressure against my shoulder in an  
upward direction. Whilst he was  
doing this I applied my hand to the  
sternum & perceived the upper part  
move forward upon the under part  
~~the patient~~ was also felt receding

Lect. 20<sup>th</sup>  
FRACTURES of the STERNUM

The Sternum tho' rarely yet it is sometimes fractured, and if the fracture is in a transverse direction it can easily be discovered by rubbing the broken extremities agst, each other. —

As regards the fracture itself it is of little importance, But the great danger arises from the injury resulting to soft parts. —

Abscesses often form in the Thorax or Speculae of bone pierce the Mediastinum. —

If called to a case of this sort, our object should be to prevent inflammation & to accomplish this we must enforce the Antiphlogistic plan & push it to a great extent, V. S. purging, low diet &c. &c. —

If the fracture be compound and

- + and mostly at the angles of the ribs.
- + The first & second ribs are very seldom broken
- + because the ends of the bones are fused at the spine & sternum.
- II Because the intercostal muscles, above & below act equally in opposite directions.

2

expoliation will most probably ensue & we  
are then to remove the long pieces. —

If abscess form we only <sup>our</sup> ~~our~~ source is to per-  
forate the sternum & discharge the pus. —

The Ribs are often <sup>not</sup> fractured in consequence  
of the strength derived from their arched  
form they are usually broken by falls, or  
violent blows, most commonly in a trans-  
verse direction but sometimes obliquely —

The fractured ends cannot overlap each  
other neither can they be displaced laterally  
they are commonly forced in, tho'

Boyer relates a case of its being forced  
out this is the only case on record & was  
occurred by a heavy waggon pressing a  
man against a wall the sternum in this  
case was pressed in & of course the ribs were  
pressed out. —

Fractures of the Ribs may be discovered

by an acute pain in the part.

and the patient coughs up blood.

at the time of breathing & by pressing the rib at different parts Crepituation may be heard or felt — If however we are still at a loss to ascertain where the fracture has taken place, desire the patient to Cough & it will be very evident.

If the lungs are pierced Emphysema takes place & the treatment in this case is very simple, a Comprep is to be applied & then a roller at the broken part — But if it proceeds to an alarming degree, it becomes necessary to make an incision into the thorax, by this means one lung will be collapsed & air will not escape from the other neglect that the puncture should not be made at the place of fracture.

The Treatment of Fractured Ribs, consists in preventing their motion as much as possible in respiration & then the patient

+ I recommend the Demulcent Drunks. they are of  
great advantage when there is cough.

+ If inflammation of the pleura takes place - the  
remedies for Pleury are proper.

I have the know this innominate fractured  
at the upper part is horizontally across  
from the anterior transverse process to the posterior  
process - ~~right~~ also - from one side of the  
spinous down through the ramus - ~~right~~

4

will be forced to breath by the Diaphragm,  
as Respiration is the only means by which  
Displacement can take place, we in this way  
secure the union of the two ends, a roller  
is all that is requisite. —

The Antiphlogistic plan is to be pursued  
V. S. purges, & ~~coo~~ quiet ~~coo~~ demulcents have  
been used with advantage to relieve the cough  
which usually accompanis fract<sup>ure</sup> ribs. —  
Their Modus Operandi is not known, but  
the fact is certain, ~~that~~ about 35 days is the  
usual time in which union of <sup>the</sup> bones takes  
place. —

The Cartilages of the ribs are found often  
fractured & are fractured, the treatment is precisely  
that as above detailed. —

The Bones of the Pelvis are sometimes frac-  
tured & the Sacrum is fractured but it is  
of little importance as it respects the bone  
itself, but the soft parts generally suff. much.

+ It is also fractured at its inferior angle and  
also in an oblique direction, passing through  
the superior and inferior costa of the bone

viz. so 

In the first case both fragments are displaced  
but in the other neither

In Coccygis we may observe the same & the only thing necessary to be done, is to confine the patient to the horizontal position & prescribe the Antiphlogistic Regimen, in this way we will avoid collections of matter in & about the rectum.

When the lum or Acetabulum are broken Splints & bandages — rest as above described & depletion are the only remedies requisite.

If the Bladder is punctured by a Specula or bone it is incorrect to dilate the wound in search of it — a Catheter is to be introduced & retained in this situation for a few days, by this time adhesive inflam: will occur and the parts will unite.

If the Scapula is rarely broken, but when the accident does occur, it is most usually at the Acromion process, the fracture may take place in any direction. But it is most commonly transverse, It is

the fractured process is carried outward & downward  
by the action of the supra Deltoid muscle & by  
its own weight

and the scapula having lost the support which  
prevents its displacement tips over on the trunk  
anteriorly so that the shoulder is found of more  
anterior than natural and downward.  
The arm also has lost its support &c.

ascertained by feeling this portion detached  
from the body of the bone by the muscles. +

The Treatment is, to place a Compress under  
the Arm pit & bind the Arm down to the side  
by means of a Roller & then the suspending  
bandage. —

## Lect. 21<sup>st</sup> Fractures of the Clavicle

This bone owing to its exposed  
situation & its slender shape is often broken —  
and this usually takes place about the middle  
of the bone. There is no difficulty in  
deciding whether or not the bone is broken  
If it is. Motion is entirely lost at an end, Consider-  
able pain is felt & the part carries this  
shoulder much lower than the other, he  
endeavours to rest it upon any object  
that may be in his way.

and also if the fracture be between the acromial and  
coronoid processes - so also if the fracture (tho' at  
the middle of the bone) be from the under part  
slightly upward & inward toward the sternum.

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It is said that Desault could always tell by the attitude of the patient whether the ~~left~~ Clavicle was broken —

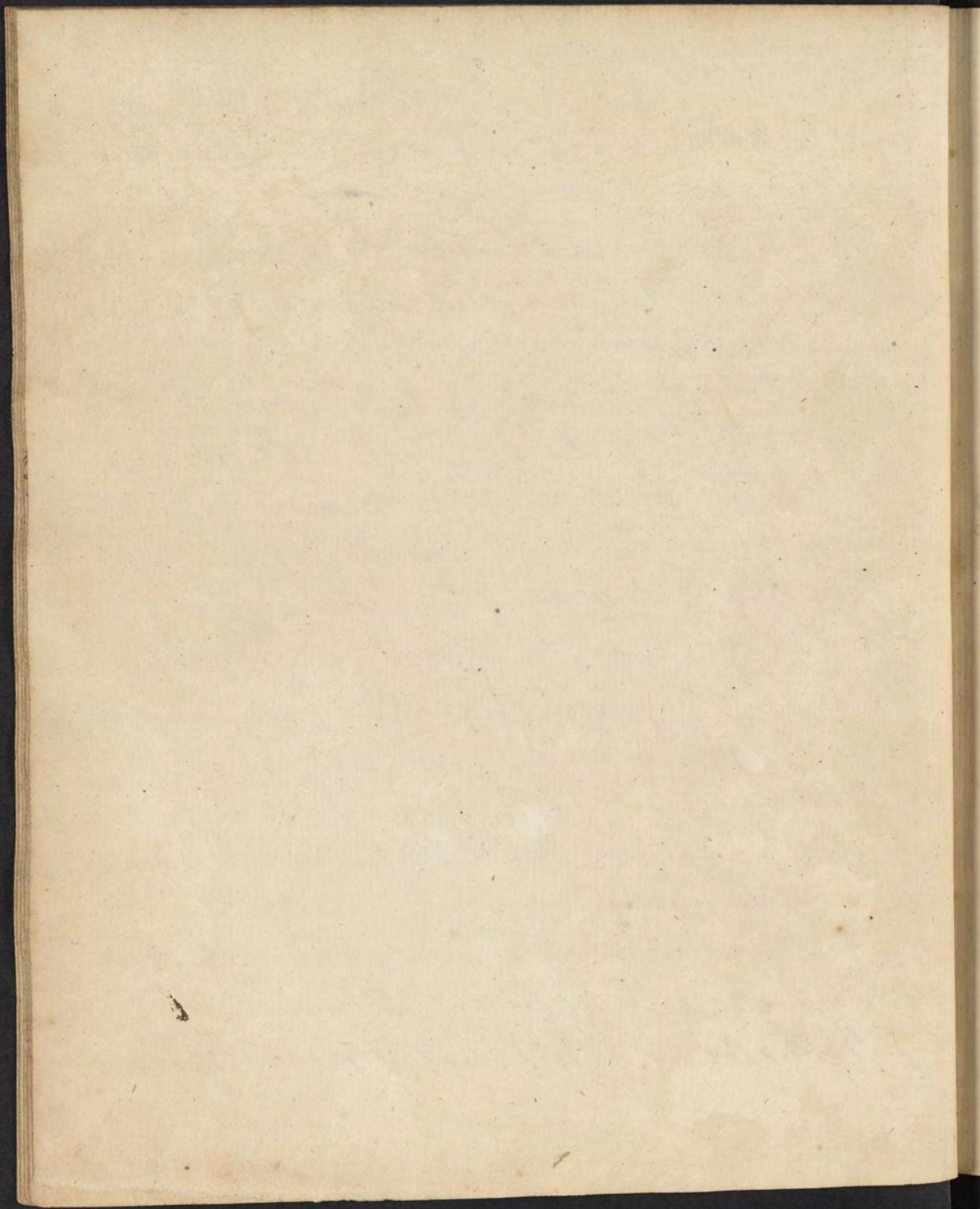
If the fracture be near the Sternum, there is very little displacement owing to the strength of the ligaments of this part. —

The object in view is now to replace the bones in their natural situation & retain them so; the application of the dressings, bandages cushion &c. see effect this purpose. —

The first brings the Arm upon the body & this counter acts the action of the Sartorius, Dorsi & Pectoralis Major, this first should be placed by a distinct roller, as the roller is now applied which confines the arm & presses the lower part where it is tight against the body. —

The third Roller is now applied, the object of which is to support the arm. —

Of however this bandage made of redcuring



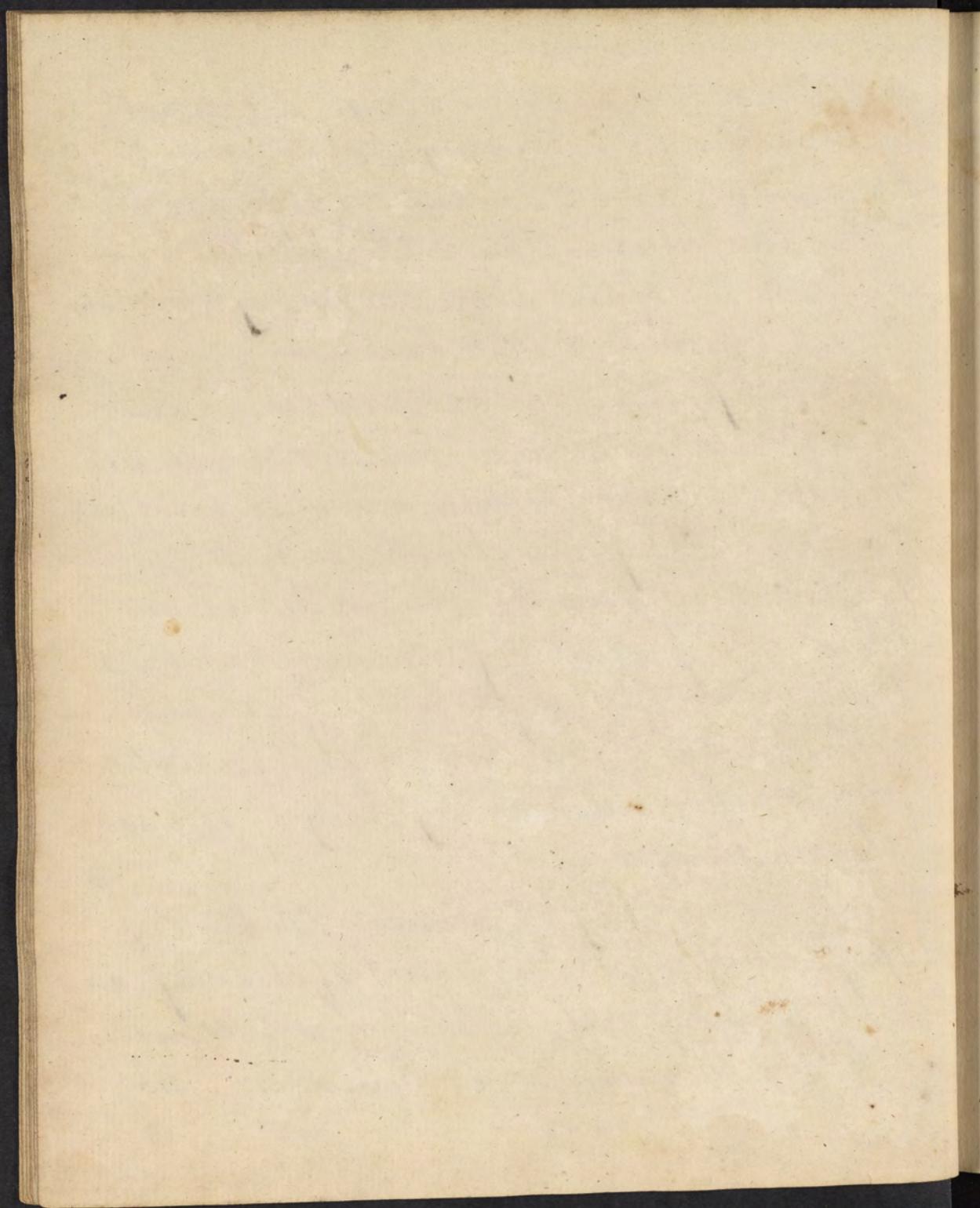
Retaining the fractured bone in contact is not approved — he may use the figure 8 bandage; that is, a bandage so applied as to form this figure — this is the Eng<sup>t</sup> Method —

To the use of this there are many objections which is needless to state here —

After applying two bandages &c — in case of a fractured clavicle, we shall always ascertain whether the circulation is going on, for if it be compressed by the bandages the surgeon will soon be obliged to remove them, the patient experiencing numbness, to ascertain this important fact is — whether the circulation be free & uninterupted the radial artery may be felt at the wrist.

It is necessary to examine the state of the parts often, to the neglect of this important point much mischief has followed.

If the fracture be comminuted, no



No contrivance yet known will prevent deformity; a modern French Surgeon of great reputation has laid aside all bandages & confines his patt. in a horizontal position; this w<sup>th</sup> answer if the patient could be confined in one position.

Os Humeri is occasionally fractured most frequently near the middle; but the fracture may take place at any point between the head of the bone & the coracoides.

Dr. Dorsey has seen the bone broken either the capsular ligament, and he has seen the coracoides detached from the body of the bone. The Treatment is very simple, the symptoms are evident, distortion, pain, & crepitation. Counter extension sh<sup>ld</sup> be made by an assistant clasping the patt. round the chest & extension from the arm.

A roller is now to be applied from the arm for we are to expect some inflam<sup>r</sup>. at first



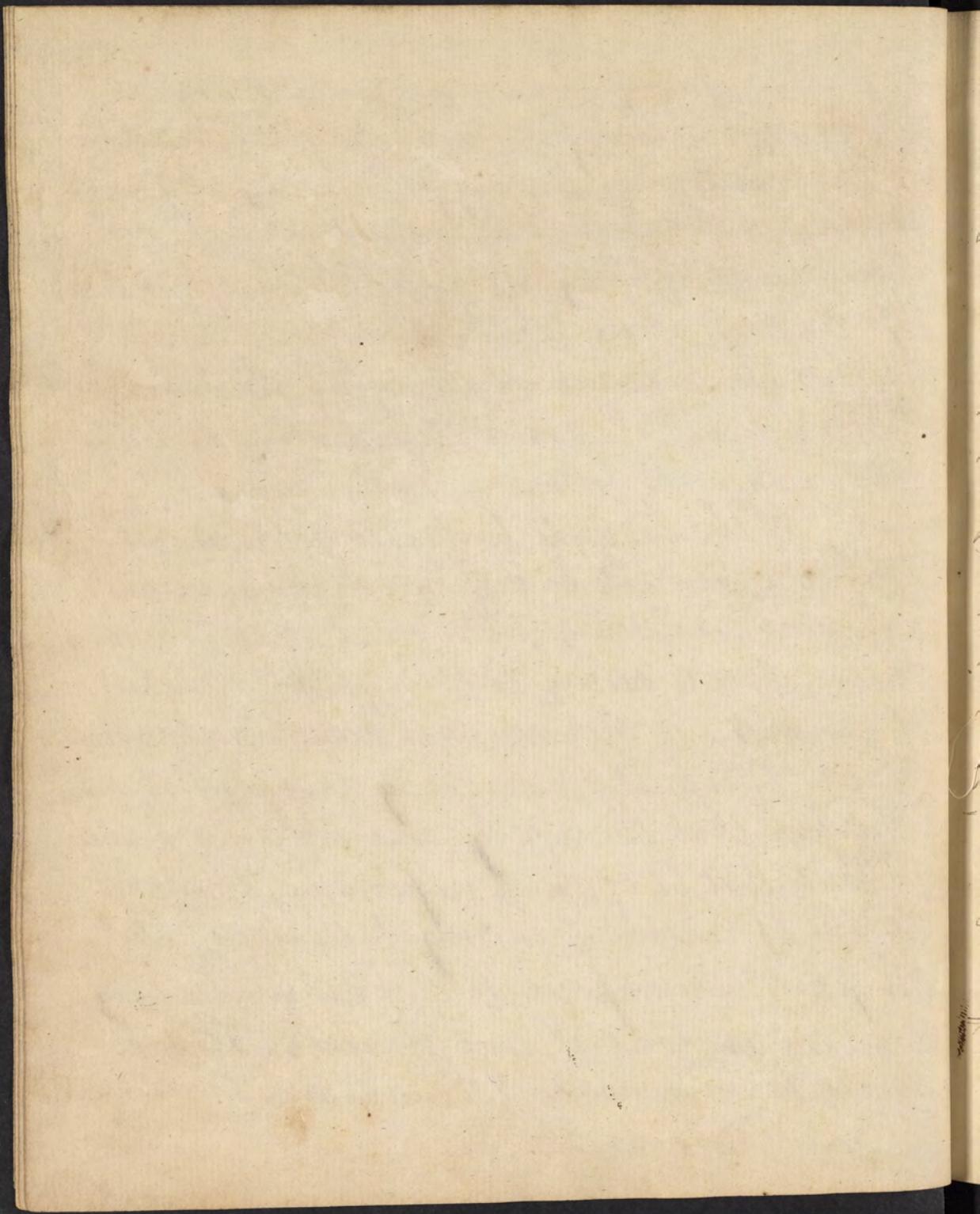
to the shoulder; then Splints are now applied,  
One external, One posterior & the other anterior.

The bandages is to be applied loosely at first  
for we are to expect some inflam<sup>r</sup>. at first and  
much swelling, & by applying the bandages loosely  
we will allow for this.

For the manner of applying the bandages  
See we refer to Dorsey's Elements of Surgery  
Dr. P. made the following observations

If the Clavicle be fractured near the  
Scapula it will be difficult to discover the  
discrepancy as little displacement of the fragments  
exist, this is owing to the strength of the  
Ligaments. Under such Circumstances, we  
would think it unnecessary to apply bandages.

Suppose that the injury was not discoverable  
it could not be of much importance, But this  
Method of reasoning is very fallacious, tho'  
the parts are opposite to each other yet they  
are not in contact nor at rest, The soft  
parts become united & sometimes even suppuration



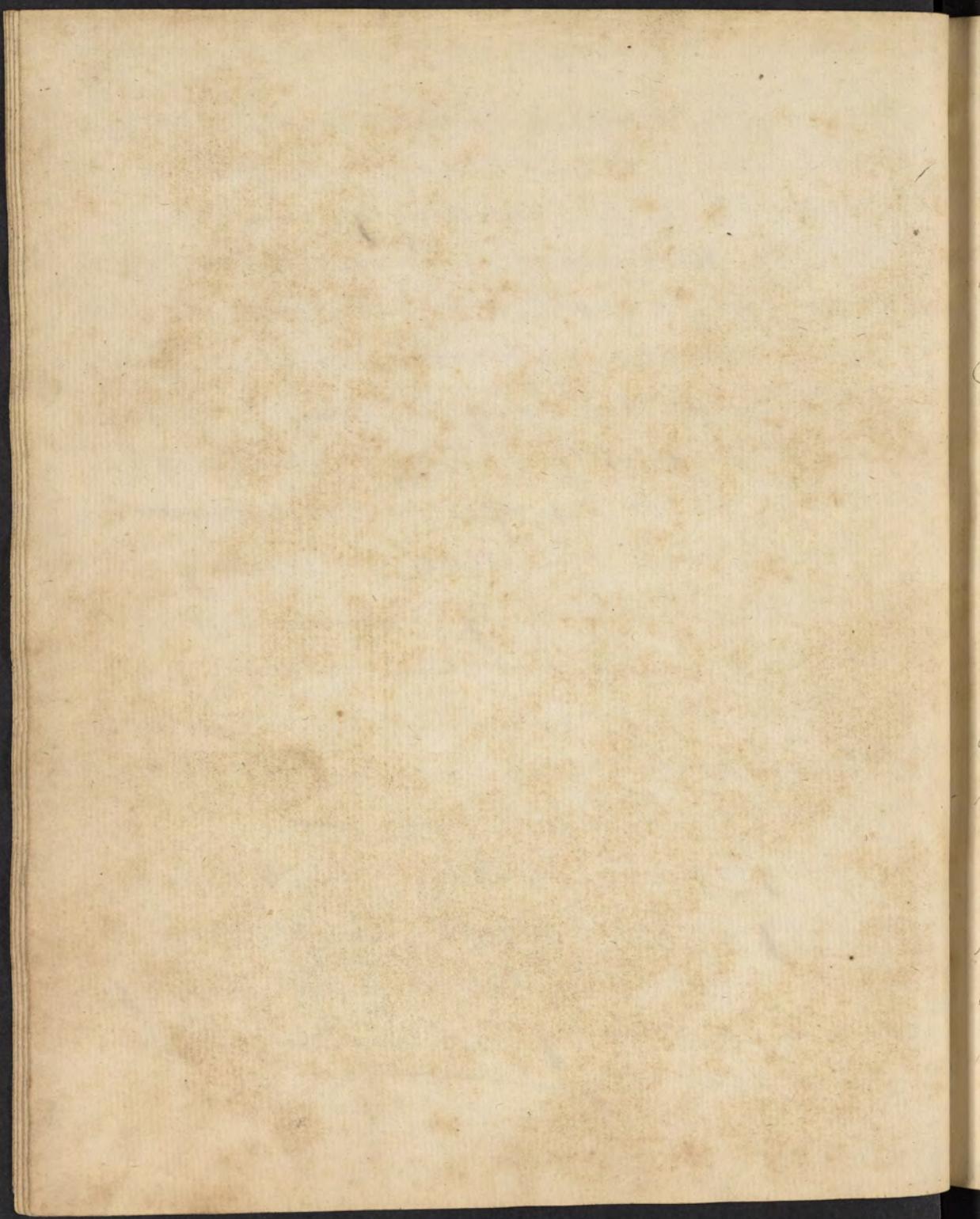
If therefore much violence has been done to the bone, it is correct always to suspect a fracture & treat it accordingly.

Before an opinion is given as to the fact of their being a fracture or not, much attention to circumstances, appearance, &c is proper, in as much, as it is very injurious to the reputation of the Surgeon if some other Surgeon Dr<sup>o</sup>. prove his opinion erroneous.

The Bandage of Desault is certainly the best in use. Yet it is by no means sufficient in all cases. — The sternal fragments will sometimes be separated from the scapular portion, notwithstanding the utmost attention in its application.

In applying this bandage much care is necessary to avoid compressing the nerves.

Dr<sup>o</sup>. P. — has seen a case in which paralysis was produced by pressure continued for a short time only.



A countryman fell asleep and after a few hours awoke - But could not move his arm; he applied to Dr. P. - but nothing could be done for him, he never recovered entirely the use of his arm.

## Lect. 22<sup>o</sup>.

### Fractures of the Os Humeri.

(Fractures of a different sort from those noticed in the preceding Lecture.)

From the situation of the neck or upper end of this bone we would suppose that it was rarely broken, But in practice we find this supposition confuted, this accident often happens. - They are usually transverse & are caused by force directly applied to the bone. - The fragments are frequently displaced. If the force be applied externally the fragments will be thrust inward, & vice versa. It is therefore of some importance to know how



it was produced.

It occasionally happens that the vessels are lacerated & in this case ~~ecchymosis~~ more ensues & it is impossible to discover the point of fracture, the Bone does not change its appearance, this is however owing to the swelling of the parts.

A superficial examination would induce the Surgeon to suppose the accident to be mere Contusion, But there may be both contusion & fracture.

In order to ascertain the true state of the case the Surgeon should introduce his fingers into the Osseum, the integuments here being very superficial, the bone can be felt. If Dislocation has taken place the round head of the Os humeri will be in contact with the fingers.

If Fractured the sharp edge of the fragments will be perceived. — It may be further known, by an assistant counter

There the rotundity of the shoulder is not lost  
but there is a depression below the shoulder.

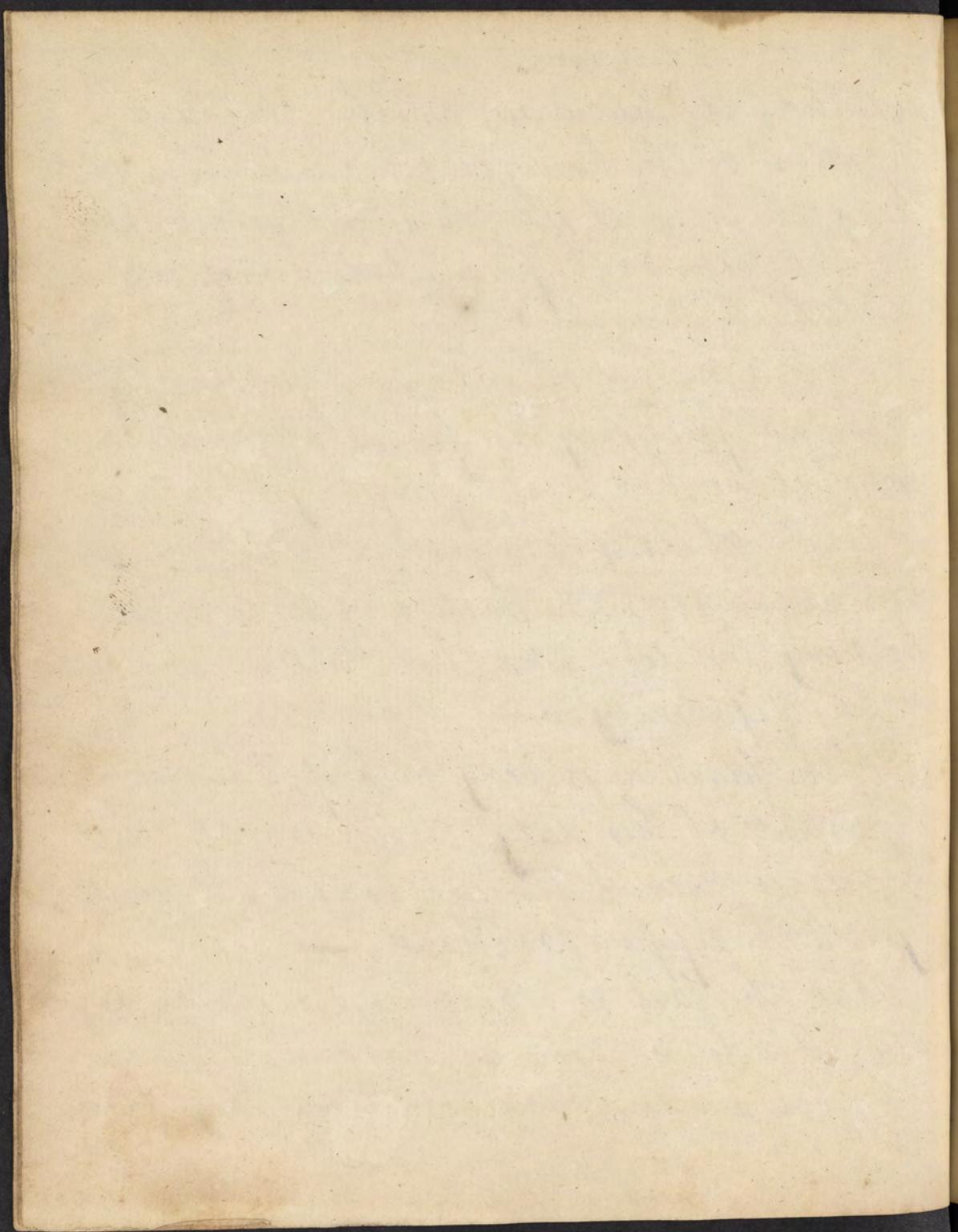
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extending the humerus, another the lower portion of the bone, while the surgeon taking the arm at the fracture & moving the piece below, or the piece above a crepitation will be heard. — +

It is a matter of no small importance to ascertain precisely the point of fracture, for if it be not treated properly & be allowed to unite of itself, the part will suffer much inconvenience, the motion of the arm will be very limited, and there will be considerable deformity. —

If the fracture is very high up, a surgeon ignorant of his duty, would conclude that bandages were sufficient so as to get securely on the upper fragment. —

But the fact is otherwise, for in no case are splints of more importance than the one now under consideration; they do not,



it is true, & sit directly upon the fracture, but they do indirectly, posteriorly they sit upon the Scapula, & exteriorly upon the Acromion & Coronal process, in this way they sit & are of much advantage. —

The Splints must extend above the shoulder or they are useless, they are to be retained by bandages & any inequality of the arm is to be filled up with Lint &c — The whole is now to be secured to the body, by a broad roller. — The roller should not be very tight at the upper part of the arm as it would have a tendency to draw the fragment towards the body — But it should be tightened at the lower part. —

Sometimes the bone is not fractured but merely splintered & this most generally takes place in a longitudinal direction —

The Splint usually sit right ang<sup>l</sup> with the body of the bone, like a spur upon the heel —

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AIRE LIMA LIMA

Motion can be feebly performed in every direction & no inspiration can be heard, yet the pain is so great as to leave little doubt as to their being some injury done to the bone, strict examination proves that the bone can be moved.

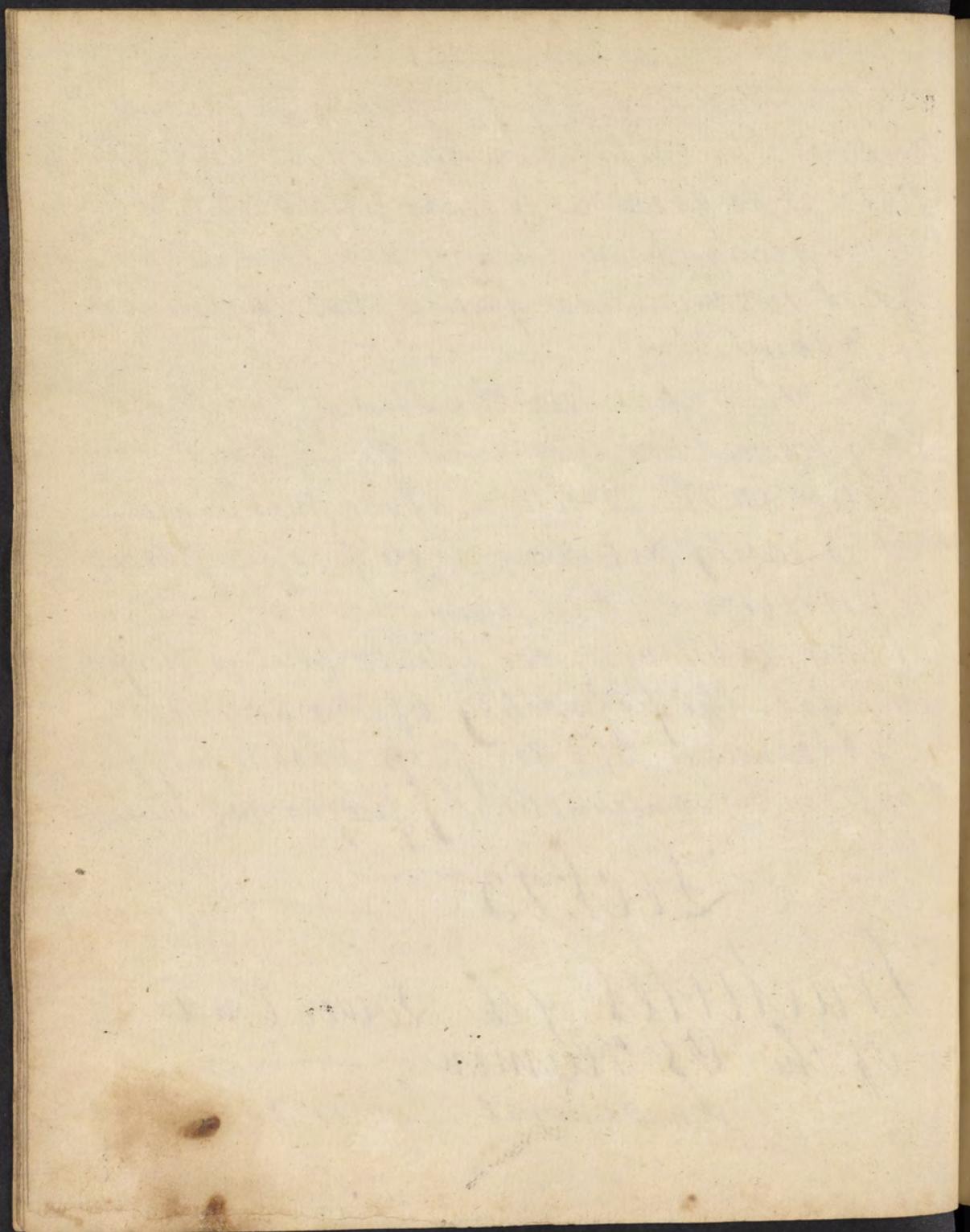
Dr. P. has seen two cases of this kind, they were not discovered by the Physr. & while in the position above mentioned. It is easily returned to its proper place if dislocated, & in examining a fracture of the Os humeri, we should always keep in mind, the possibility of this accident.

A Bandage and compress should be applied & inflammt. counteracted by proper remedies.

Lect. 23<sup>o</sup>

Fractures of the Lower End  
of the Os humeri.

In general there is not much



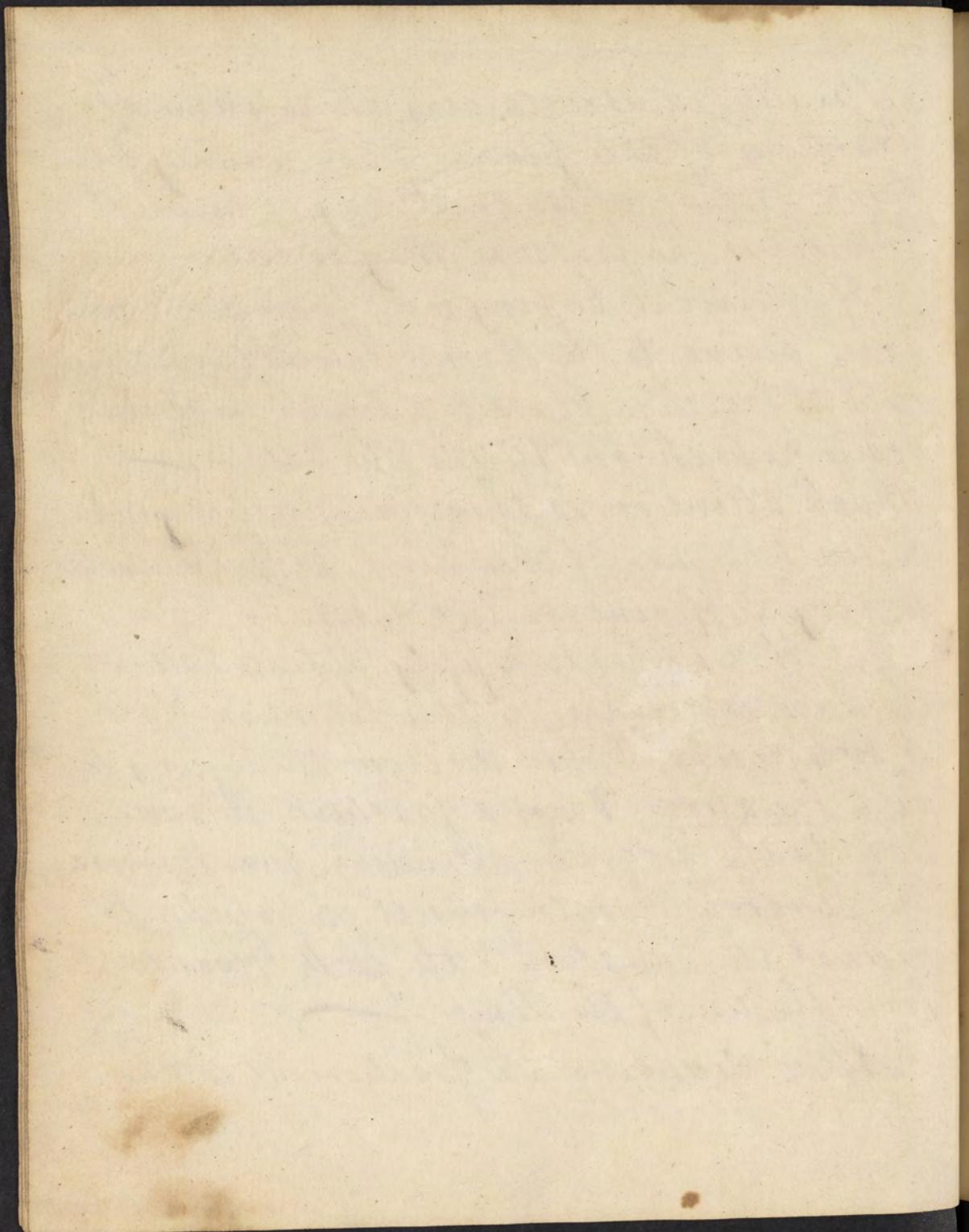
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difficulty in ascertaining the existence of  
fractures of this place. Pain usually fol-  
lows, grating of the bones may be heard &  
sometimes the fracture may be felt.

If however it be very low, some doubt may  
exist owing to the strong resemblance which  
such a fracture bears to a luxation of the  
bones which constitute the Elbow —  
Much attention is therefore necessary when  
called to a case of this kind, as the treatment  
is very different in two cases. —

If we should apply Splints & allow  
the Arm to remain in this situation for  
5 or 6 weeks, & then discover the injury to  
be a luxation & not a fracture, in addi-  
tion to the disagree attending such ignorance  
the surgeon would find it impossible to  
reduce the luxation & the patient would  
lose the use of the Limb. —

After reducing the fracture, it is the

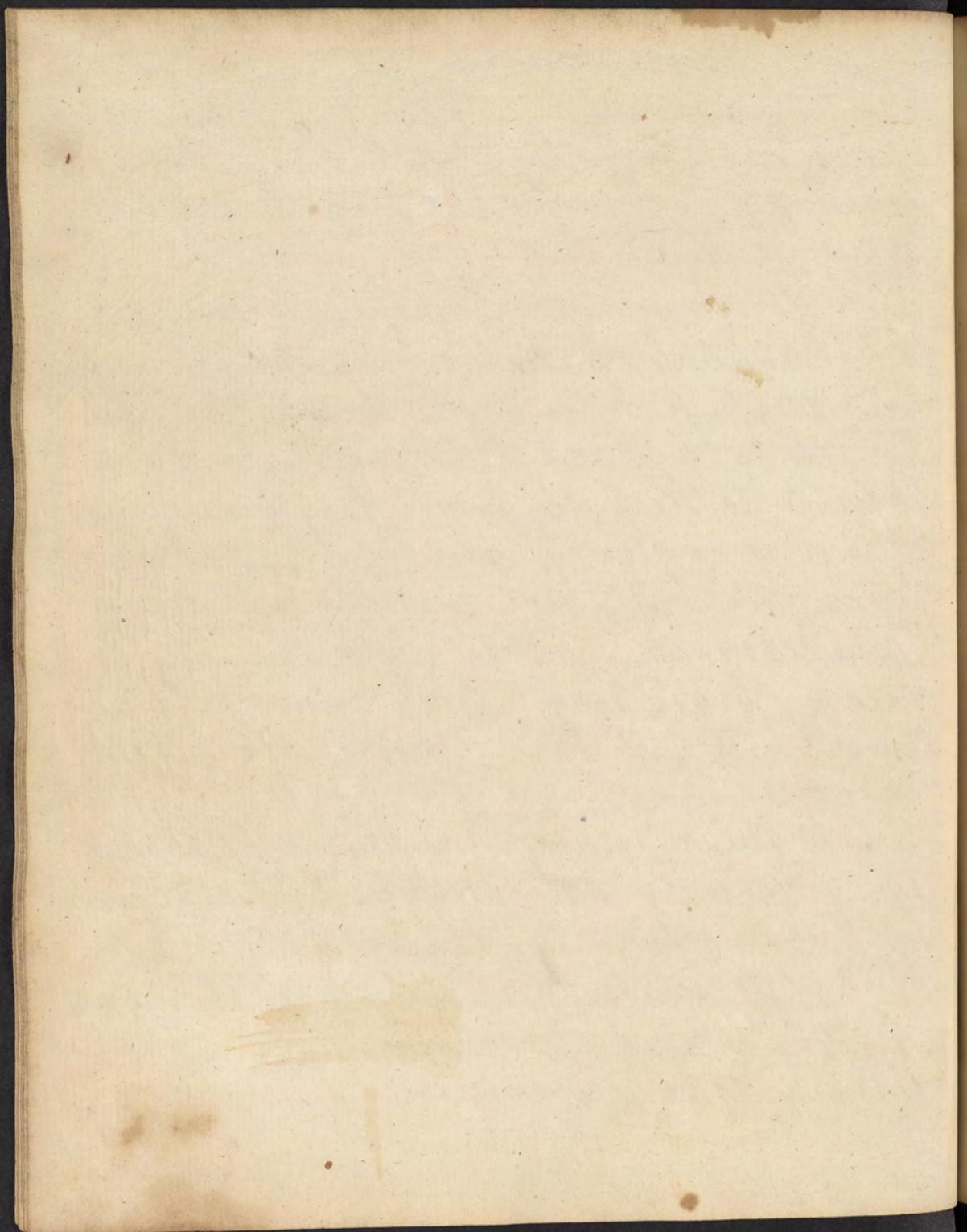


practice of some Surgeons to apply bandages & Splints reaching only to the Elbow; this is Improper, as it does not keep the lower fragment at rest.

The forearm must be kept motionless, & to accomplish this angular Splint are need every three parts from the Arm to the forearm & Reach to the hand, without this it is impossible to keep the lower fragment at rest.

As it is so closely connected with the forearm that their motion are almost simultaneous. — it is right to apply a roller, beginning at the hand, & extending up to within a short distance of the shoulder. —

Angular Splints, are then to be applied, One external, One internal & one anteriorly & one posteriorly, the roller is now to be passed down & made to cover the splint, A sling to rest the forearm upon, is all that remains to be attended to. —



In addition to the Transverse fractures we sometimes find the Condyles separated by a longitudinal fracture, sometimes only one & other times both are in this situation.

The Treatment is very similar in many respects to that above detailed in the case of the fracture last mentioned. —

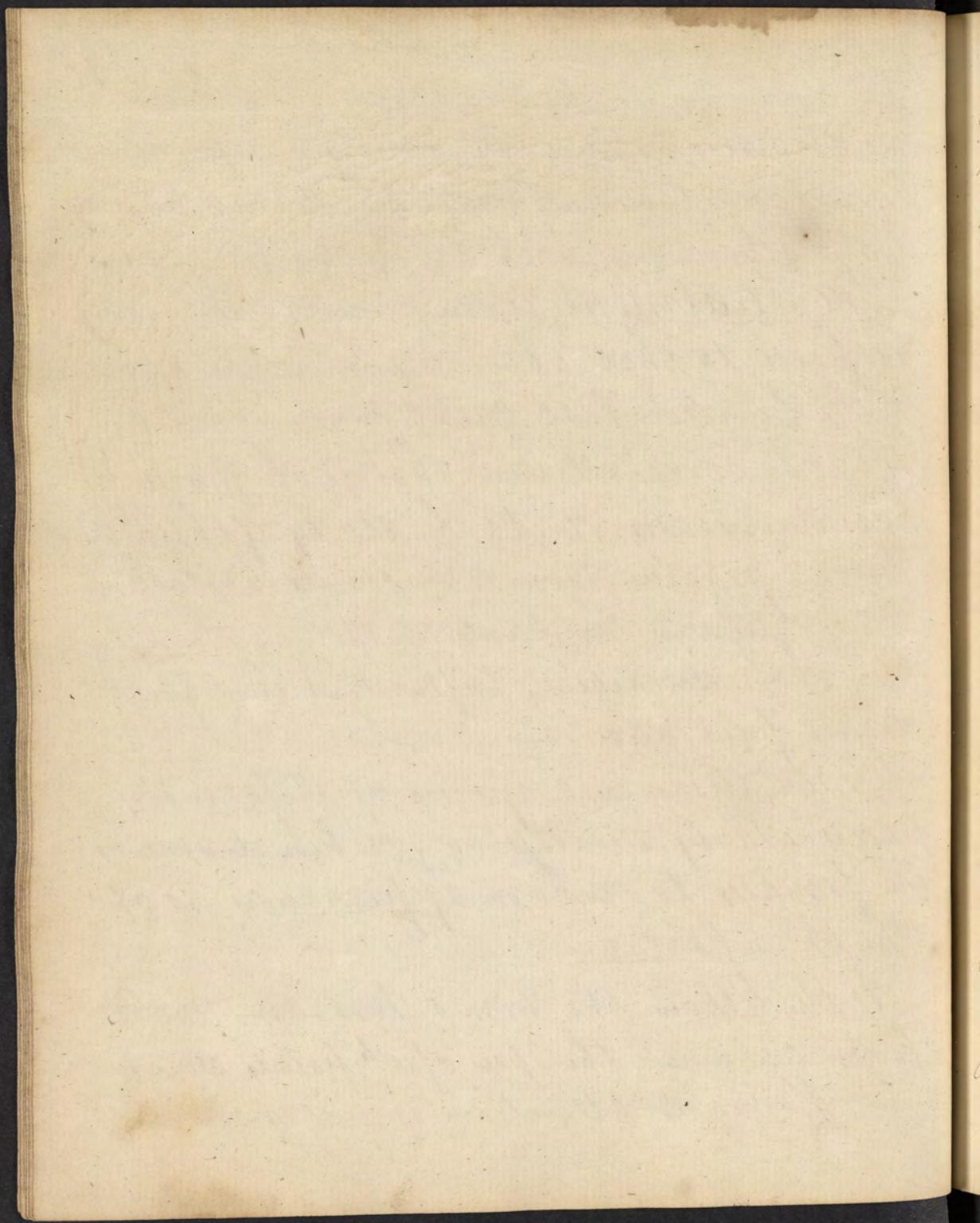
It is to be recollectec that as the fracture communicates with the cavity of the joint, it will require more time for its union. —

By keeping the parts at rest in the manner above described, inflam<sup>n</sup>. is in a great degree prevented. —

But there is a species of Deformity particularly distressing, when it occurs in females to whom appearance is of much importance. —

At the Elbow the Arm & Forearm meets & form an angle the apex of wh<sup>ch</sup> points down

If much attention is not paid to



occidents of this nature [W<sup>o</sup>g] fractures of the  
Fore-<sup>el</sup>es will point up. A plate shewing  
the deformity will be found in Dorsey's Surg. G.

To prevent this if possible

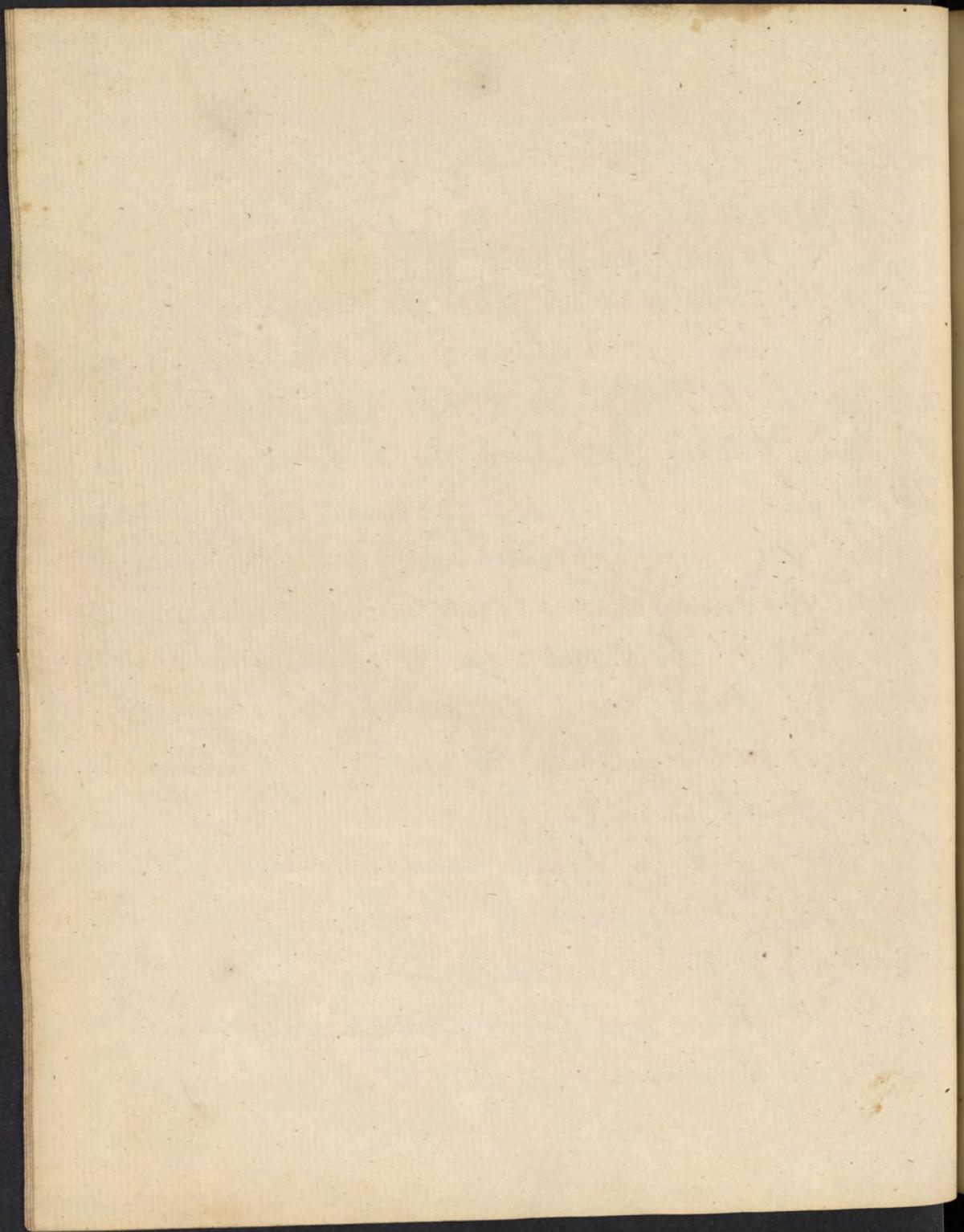
Dr. Physick has adopted the following plan:

The rectangular splints are applied  
until the 10<sup>th</sup> day, so that if ankylosis is  
to take place, the arm may be in a position  
most favourable to the patient using it.

At this time these splints are removed &  
those forming an obtuse angle are applied  
& the rest of the treatment is the same as in  
cases of fractured fore-<sup>el</sup>es, to which the  
rectangular splints have been applied.

The patient must not walk about, but be  
on his back in bed, his elbow brought near  
his body & the back of his hand placed  
reclining on a pillow. —

Dr. P has tried many different  
methods for preventing the deformity above



alluded to & never succeeded to his satisfaction but once, this was the last case which occurred & the treatment was precisely that above mentioned. —

There is yet, Another Species of fracture hitherto not noticed. —

A Transverse fracture passing from Cor-  
dyle to Cordyle; the posterior fragment passes backwards & the anterior forwards on the bone of the forearm. —

The patt. suffers much and cannot bend the Arm; it is an accident easily remedied if discovered at first. —

Dr. P never saw a case soon after the accident but the treatment in such a case would be very simple. The fragment after being reduced should be kept in that situation by bandages & the Arm & forearm should be kept at rest. —

It is of great importance to ascertain

There is not longitudinal displacement owing to the interosseous ligament which connects the bones of the arm together. The displacement is in an angular transverse direction - so that there will be depression at the part.   
+ The pain is augmented at every motion of the hand. There is an inability to pronate or supinate the hand. Inability at the place of fracture.

the nature of the nature of the fracture & therefore  
of much advantage to be well acquainted with  
the Anatomical structure of the part.

To this end it is adviseable that the Student  
should examine not only the Skeleton but  
the living Subject itself.

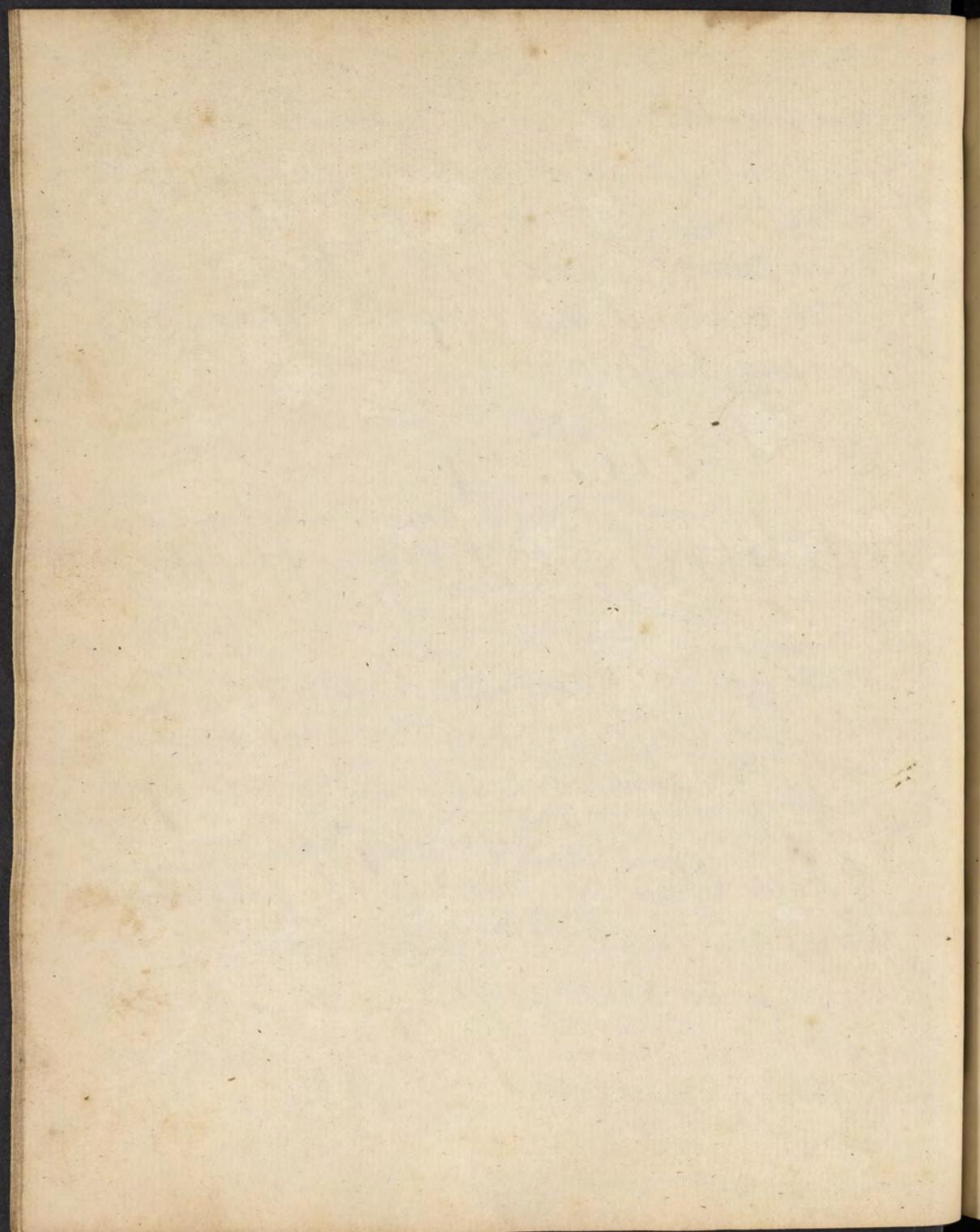
O *Lect: 24<sup>th</sup>*

## Fractures of the Fore Arm

The most usual fracture  
is about the middle of the bone & most com-  
monly but one of the bones is broken.

The accident is easily discovered by the  
excitation, pain, deformity &c.

If both bones are broken the diagnosis  
is the same with this addition that the  
arm can be bent at this place — It also  
may be discovered by making extension  
& counterextension when the patient will

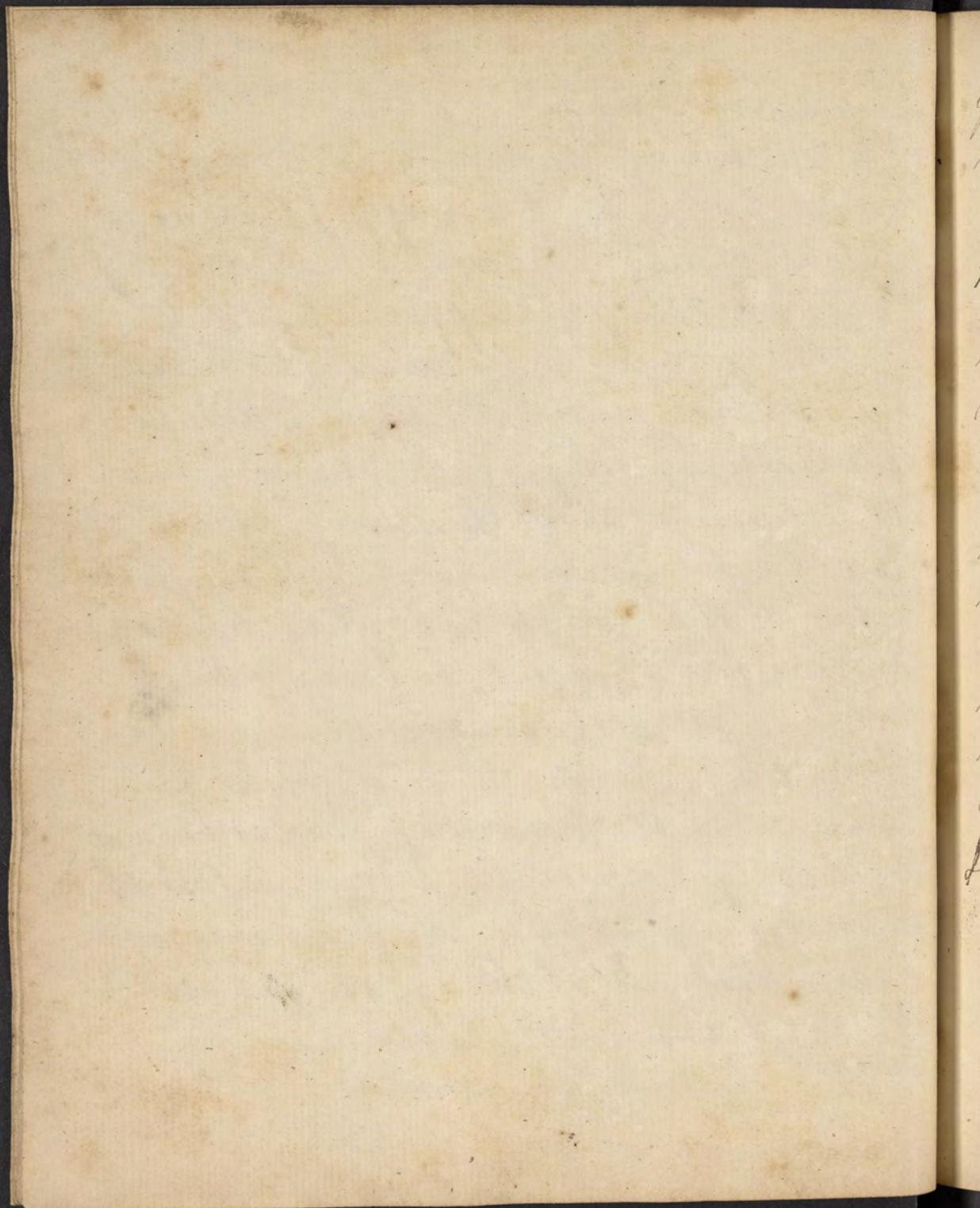


complain of pain.

The Method of Treatment, in this case, is to reduce the fracture & then apply a bandage up to the elbow. Then splints are retained by a bandage & the arm supported by a sling.

In reducing a fracture of this kind, one assistant is directed to make counter extension by clasping the os humeri & at the olecranon above the elbow, while another makes extension by taking the patient's hand, as if in the act of shaking hands; the elbow is always to be brought to the side. If the counter extension is made from the forearm, the assist. will be much in the surgeon's way, and as he must necessarily remove his hands before the bandages are applied the fragments will again slip out of their places and give the surgeon much trouble.

The splints should be wider than the

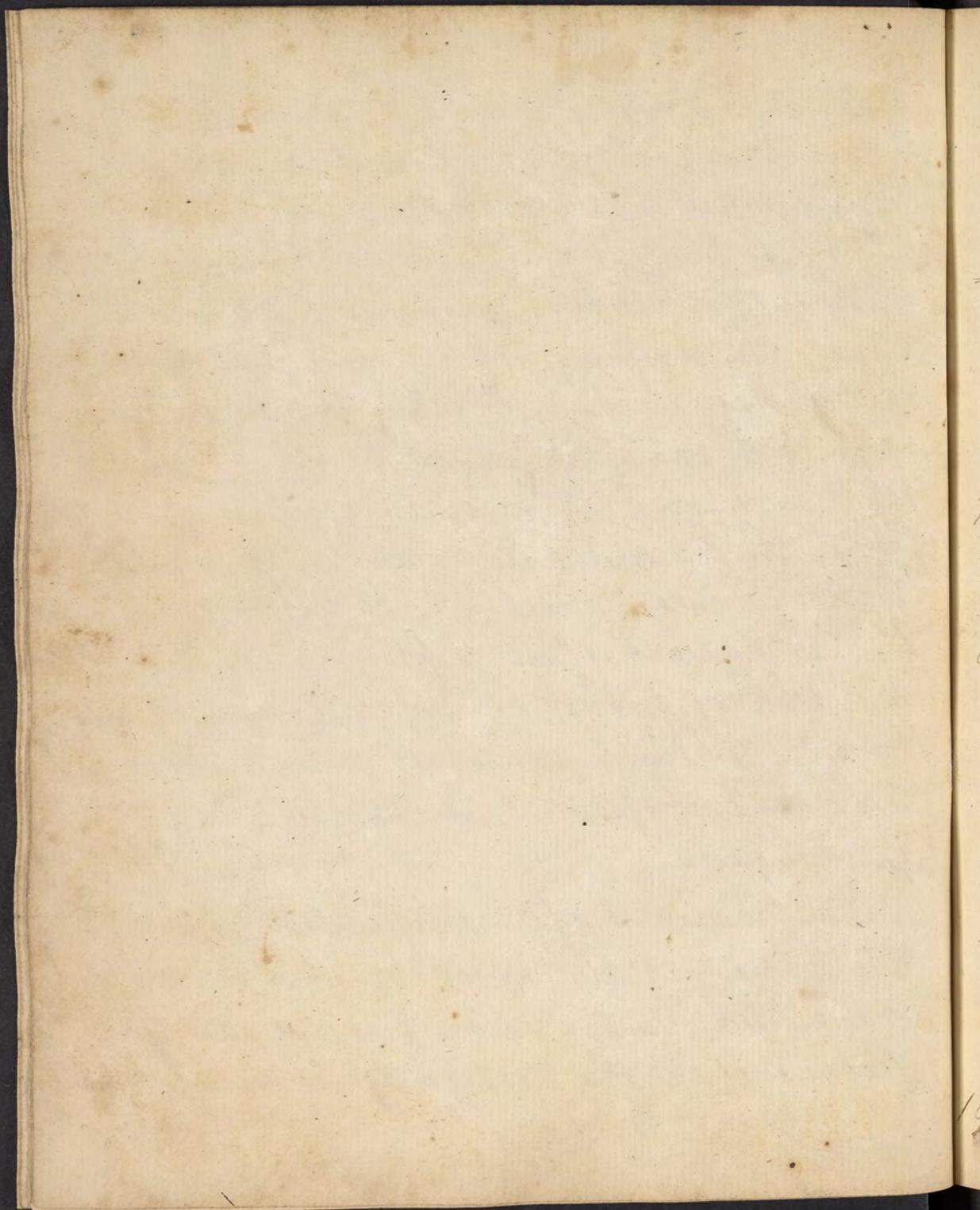


forearm. In 8 or 10 days the bandage shd. be removed and the fracture examined, if any displacement of the fragments has taken place it may at this time be remedied.

Should swelling, or much inflammation ensue, the dressings of course are to be frequently removed. "Why should the splints reach to the end of the fingers?"

As the hand will move in various directions, the radius will rotate with it and the fragments will be much disturbed & 2<sup>d</sup>. The patient is apt to place the thumb in a state of pronation & if the bones be allowed to unite while the thumb is so situated it will be impossible to make the hand supine again.

The radius is often broke alone & most commonly at the wrist or near it, it resembles a luxation & is not easily discovered, & the difficulty is much



increased if there is much swelling, 25

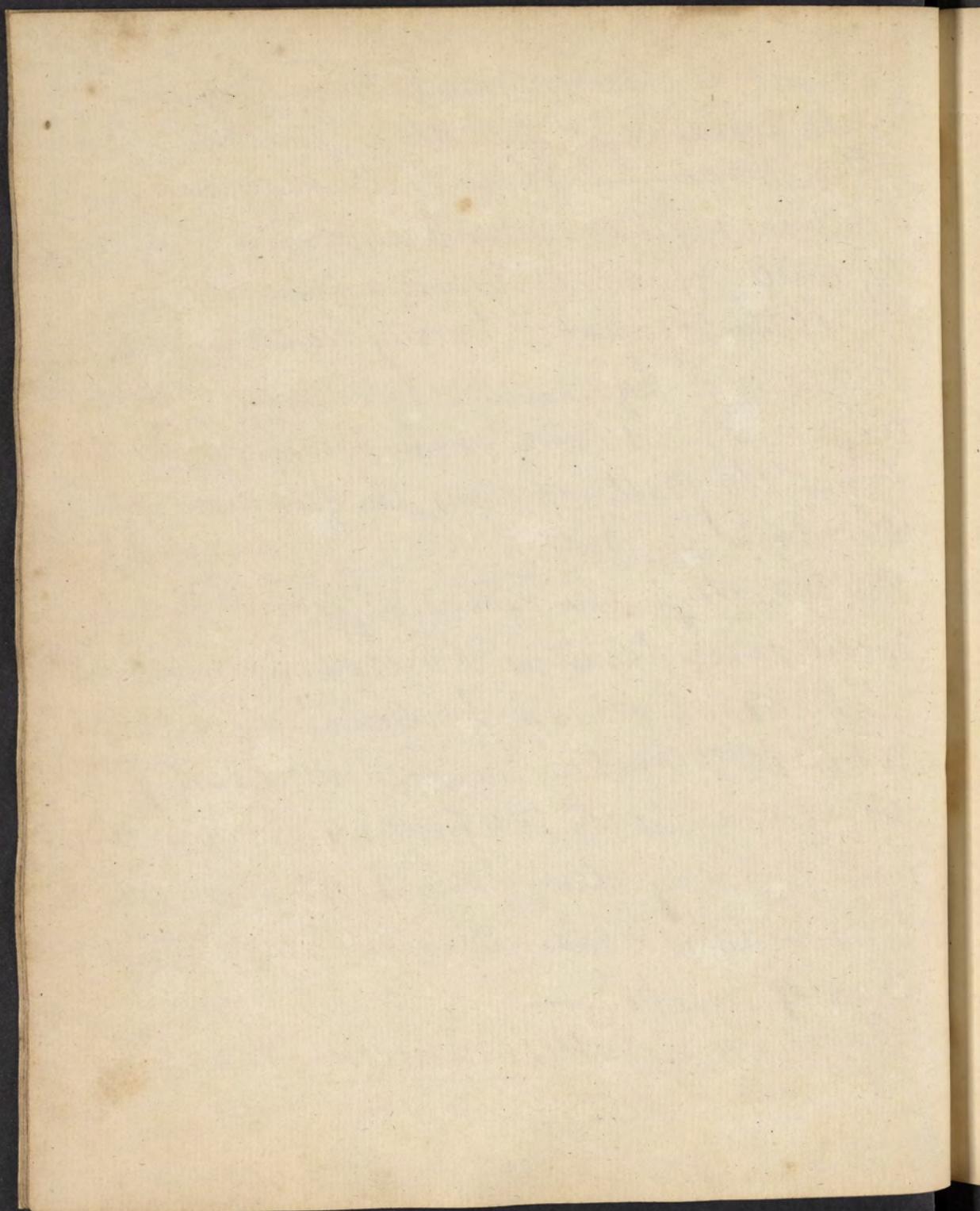
In accidents of this kind, mistakes are often made. If the patient has fallen or received a blow on the arm, or if any deformity exists, we are to suspect a fracture.

If the accident is merely lusation it can be reduced by making extension & counter extension. As soon as the bone slips into its place the patient resumes the function of the arm. But

In Fracture the case is different, the treatment is the same as if both bones were broken.

The ulna is seldom broken alone, but when it is broken the accident is easily discovered, as the integuments covering the bone are very thin. The treatment is the same as those above described, it unites in 3 or 4 weeks.

Fractures of the Olecranon sometimes



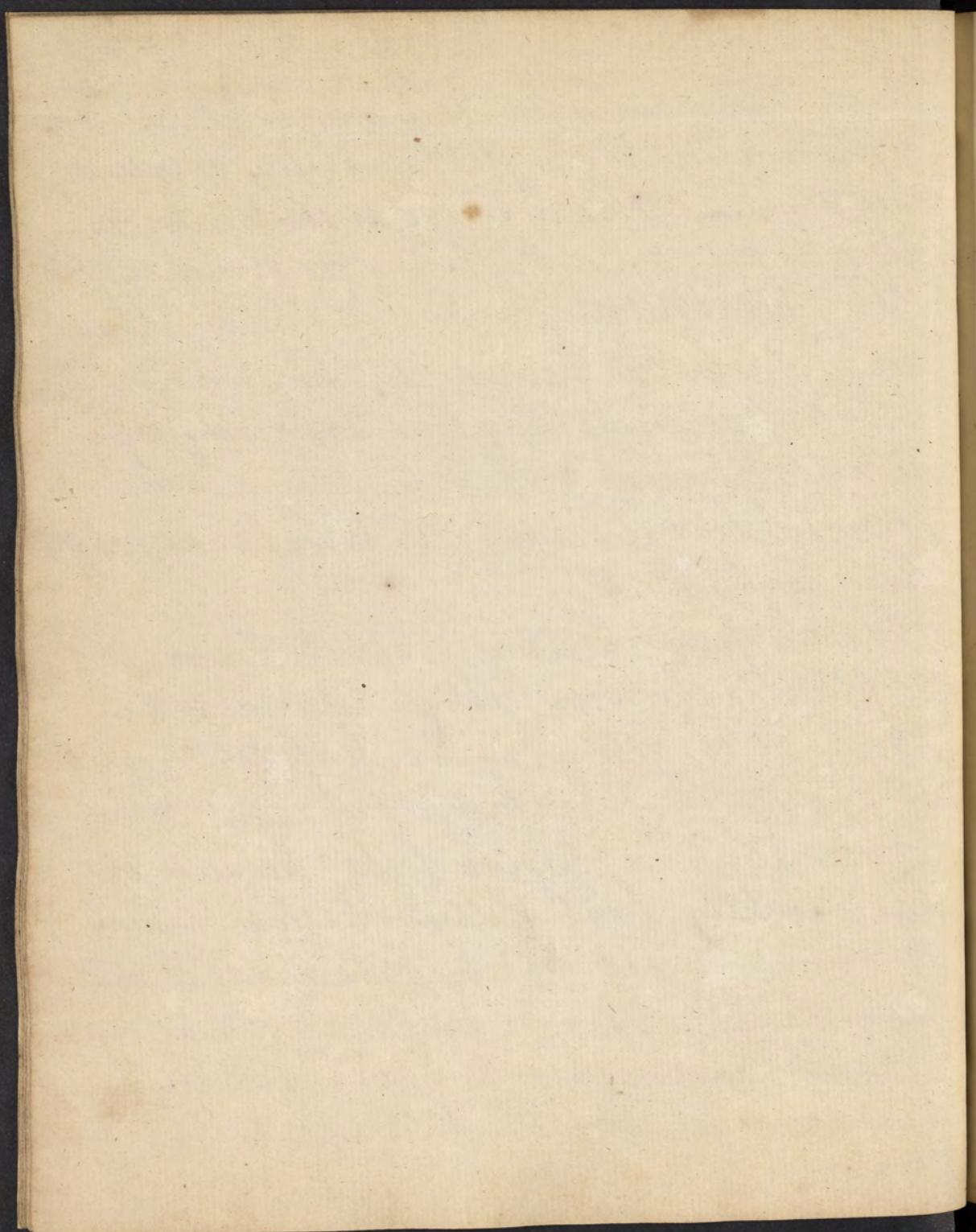
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occur & are caused by fees on the Elbow & is discovered by the patient's inability to extend his arm — This is owing to the triceps ceasing to act, or rather losing its power.

The Treatment consists in passing a bandage from the hand to the shoulder — A splint is now to be placed anteriorly to prevent the flexion of the arm, this is to be secured by returning the same bandage that was carried up.

In the first instance when the roller is applied to the arm, oblique casts are to be made at the elbow, so as to keep the elevation in its proper place, these ought to be neatly applied & drawn tight, because of but slightly braided, their action which is oblique will not be sufficient to confine the flexion in its proper situation.

Some attention is to be applied in applying this bandage, lest the skin should be



Yorever between the fragments. —

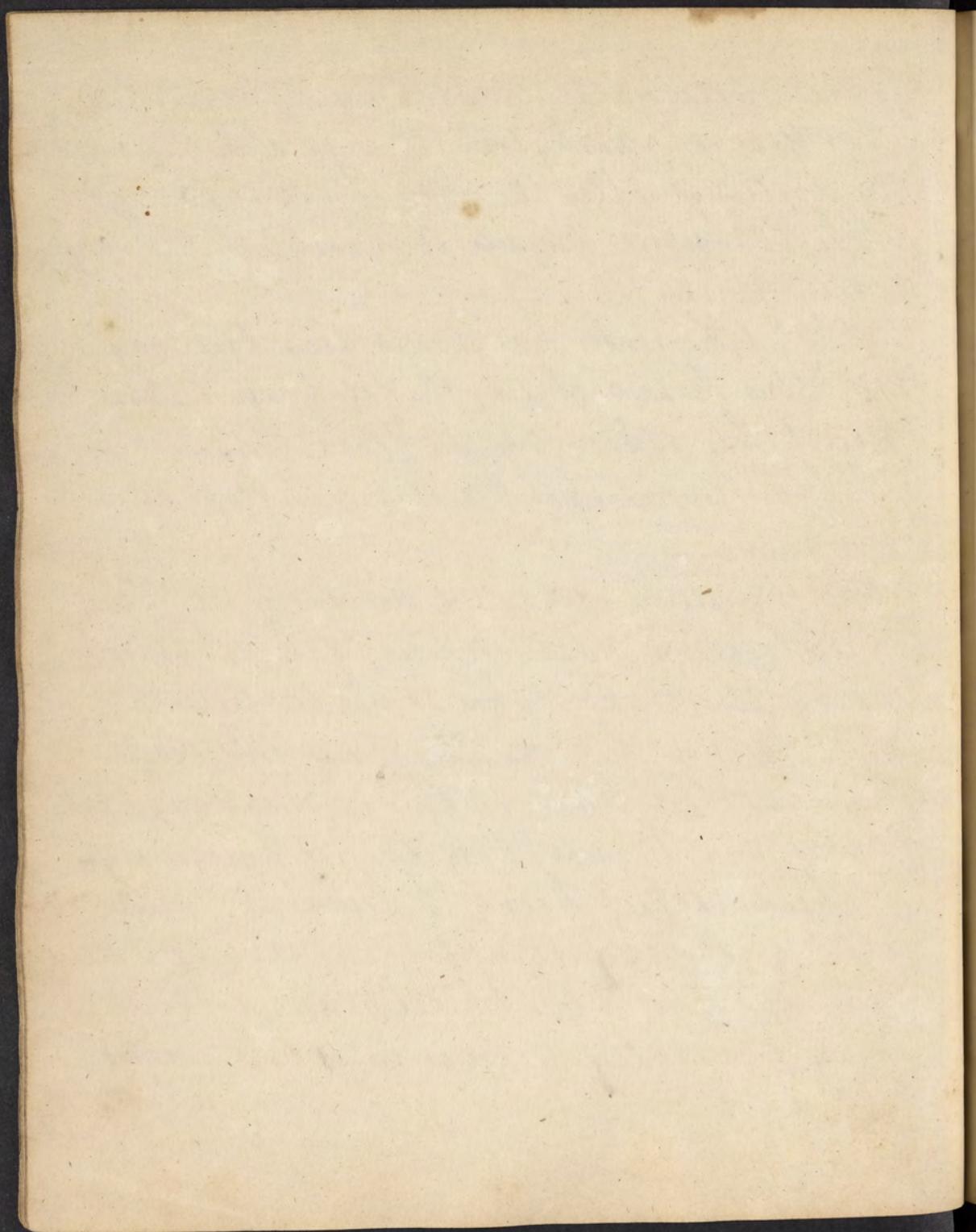
For Year of Ankylosis it is proper to remove the dressings & free the Arm in about 15 days

The Coronoid process is sometimes tho' very rarely fractured. —

Dr. Physick has never seen but one case & this was a child, who fell from a chair & struck his elbow on the floor. Fracture as above mentioned & dislocation was the consequence. —

The fracture was not discovered at first; the dislocation was received, & the Dr. about leaving the room when to his surprise he again found the Arm dislocated. — He was somewhat surprised at this circumstance, as it was one he never witnessed previously.

The mischief being known the treatment was very simple, angular splints were applied & the child soon recovered. They generally recover in 4 or 5 weeks —



Lect: 25<sup>th</sup>

28

## Fractures of the Hand

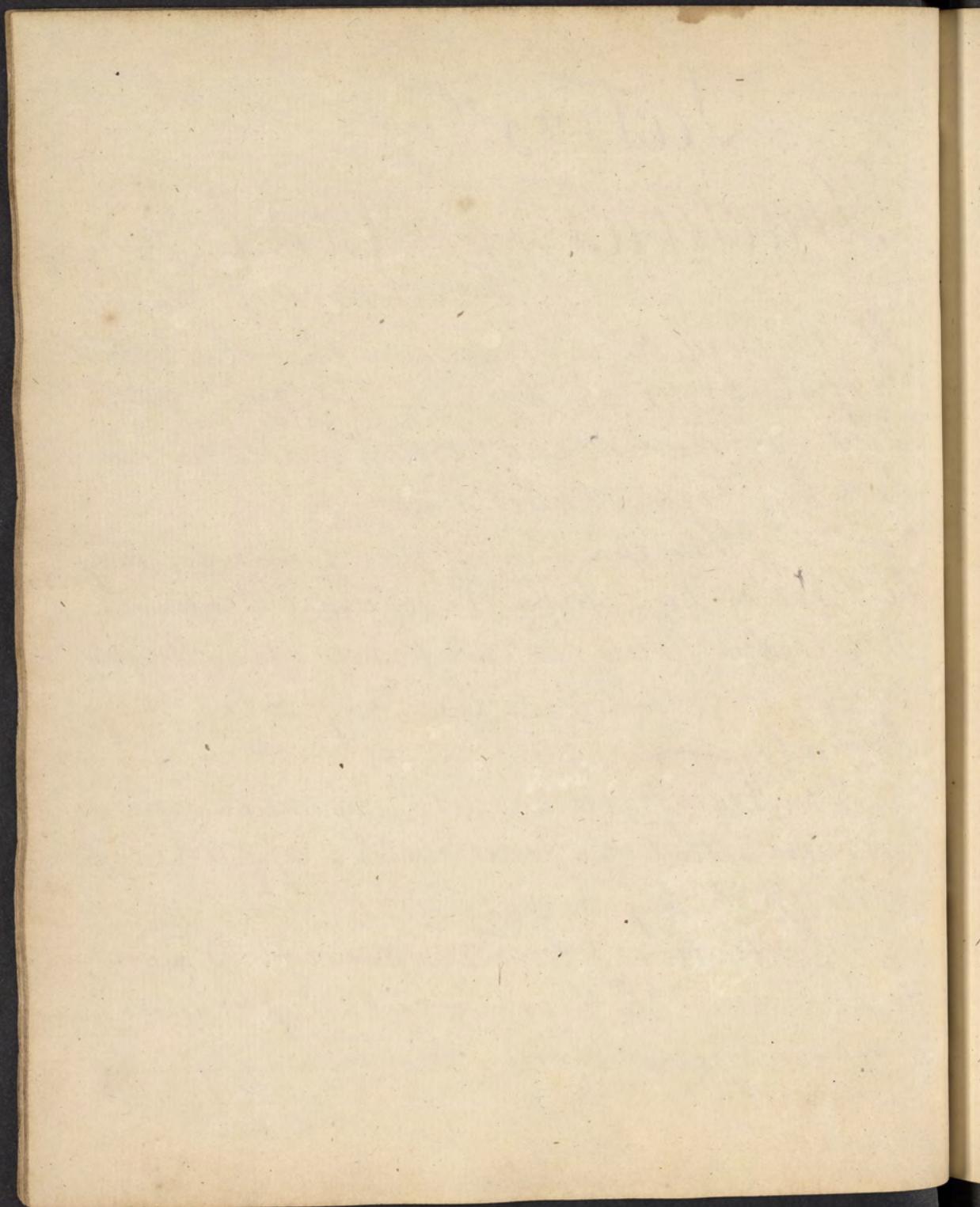
### Fractures of the Hand.

It is a very rare occurrence that the Mete-  
Carpal bones are broken — Yet this Acci-  
dent sometimes take place & is usually cau-  
seen by force applied. —

The existence of this fracture, may  
be known by taking the external & internal  
Metacarpal bones in our hands & then bending  
them, in addition to this, Crepitition may  
be heard. —

The soft parts are usually much injured  
& require attention, some cooling application  
will probably be sufficient. —

Extension & Counterextension is here  
to be made & the fracture is easily reduced  
a carved Splint & roller are now to be applied



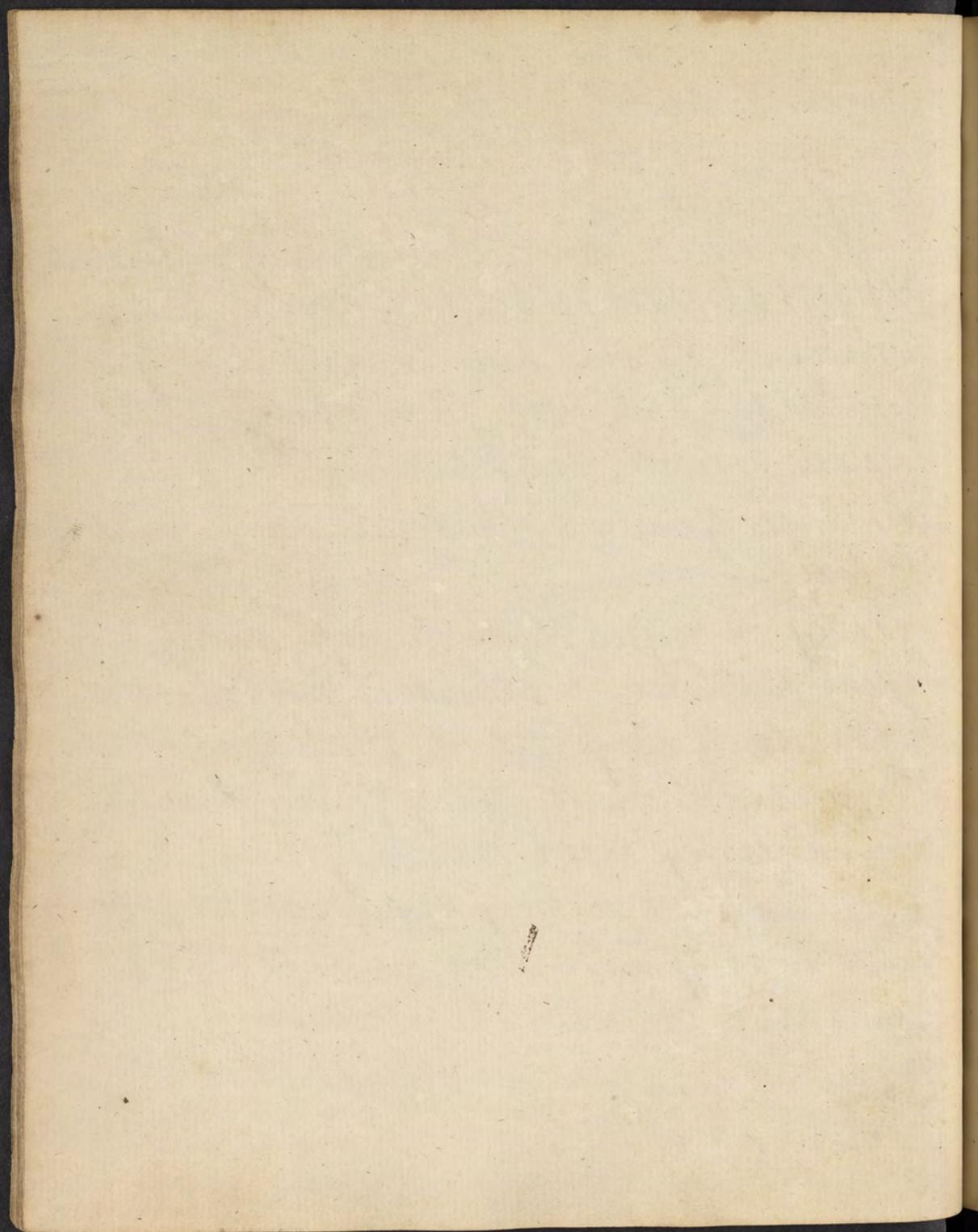
29.

In the course of 2 or 3 weeks a reunion will generally take place & little inconvenience will be experienced. —

It is still a more rare occurrence to find Fingers Broken & when so the fracture is compound. — In these cases so much injury is done to the bone & soft parts, that fractur<sup>z</sup> seldom hesitate, but decide that the extremities of the finger or the finger itself must be lost. —

Fully impressed with the impossibility of saving the limb, we think it most advisable to proceed to Amputation, at the time of the accident. No doubt many fingers have been unnecessarily lost in this way. —

Dr. P. is directly opposed to this practice & is of opinion that if there are any connection between the soft parts, however small it may be, an attempt should be



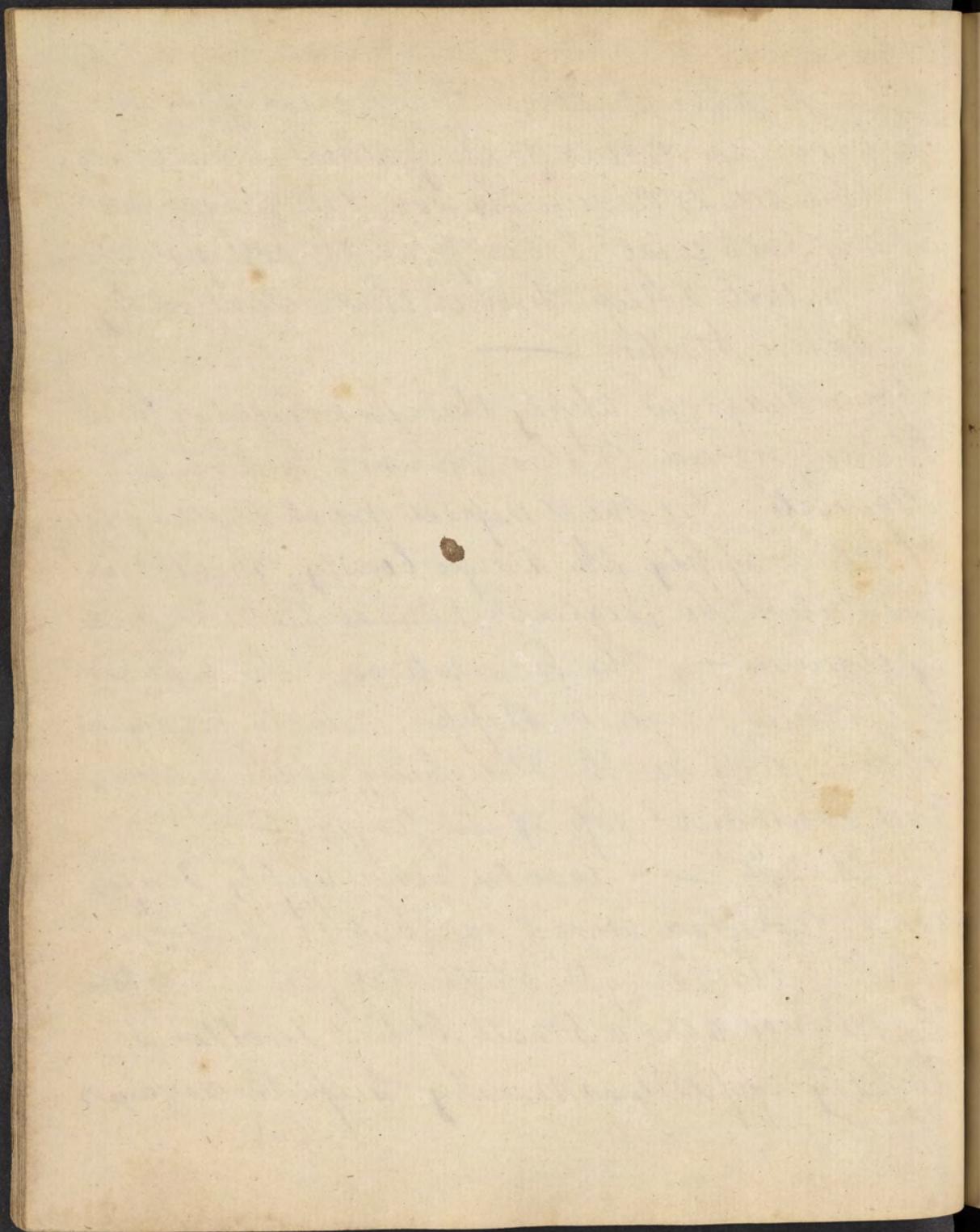
30

Made to save the limb, particularly as no  
danger can result to the patient from it —

We are to remove the bone & its fragments,  
if any such exist, & then place the soft parts  
in contact & keep them in that situation by  
Adhesive Strips.

Some Surgeons apply these in a circular form  
If we proceed in this manner caution is  
Requisite, We must expect much swelling &  
of course apply the Strips loosely, should this  
precaution be neglected much swelling  
will ensue. — The circulation, which at best,  
is languid, will be stopped, now the consequent  
of this will be the sloughing of the parts;  
and consequent loss of the finger. —

Dr. F. — would never apply Strips  
in a circular direction, but in the direc-  
tion of the length of the finger — to this  
he would add a small Splint & roller so  
lightly applied, as merely keep the fingers on



It has been above mentioned that these  
preparations are usually Compounds, so rare  
are simple ones that Dr. P. has only seen  
but two cases, the treatment was precisely  
that already mentioned.

But if inflam<sup>t</sup>. come on, the whole hand  
must be kept at rest by means of a  
splint carved such as Dr. P. was in burns,  
this was necessary in one of the cases above  
alluded to.

## Fractures of the Lower Extremities

1<sup>st</sup> of the Thigh Bone or the Femur  
is often broken and this may take place  
in every part.

Dr. P. has seen it fractured within  
the Acetabulum, he has seen the neck of  
the bone broken off and separated from

Sometimes the weaner <sup>may</sup> ~~te~~ is pattered off.

the rest of the bone entirely.

32

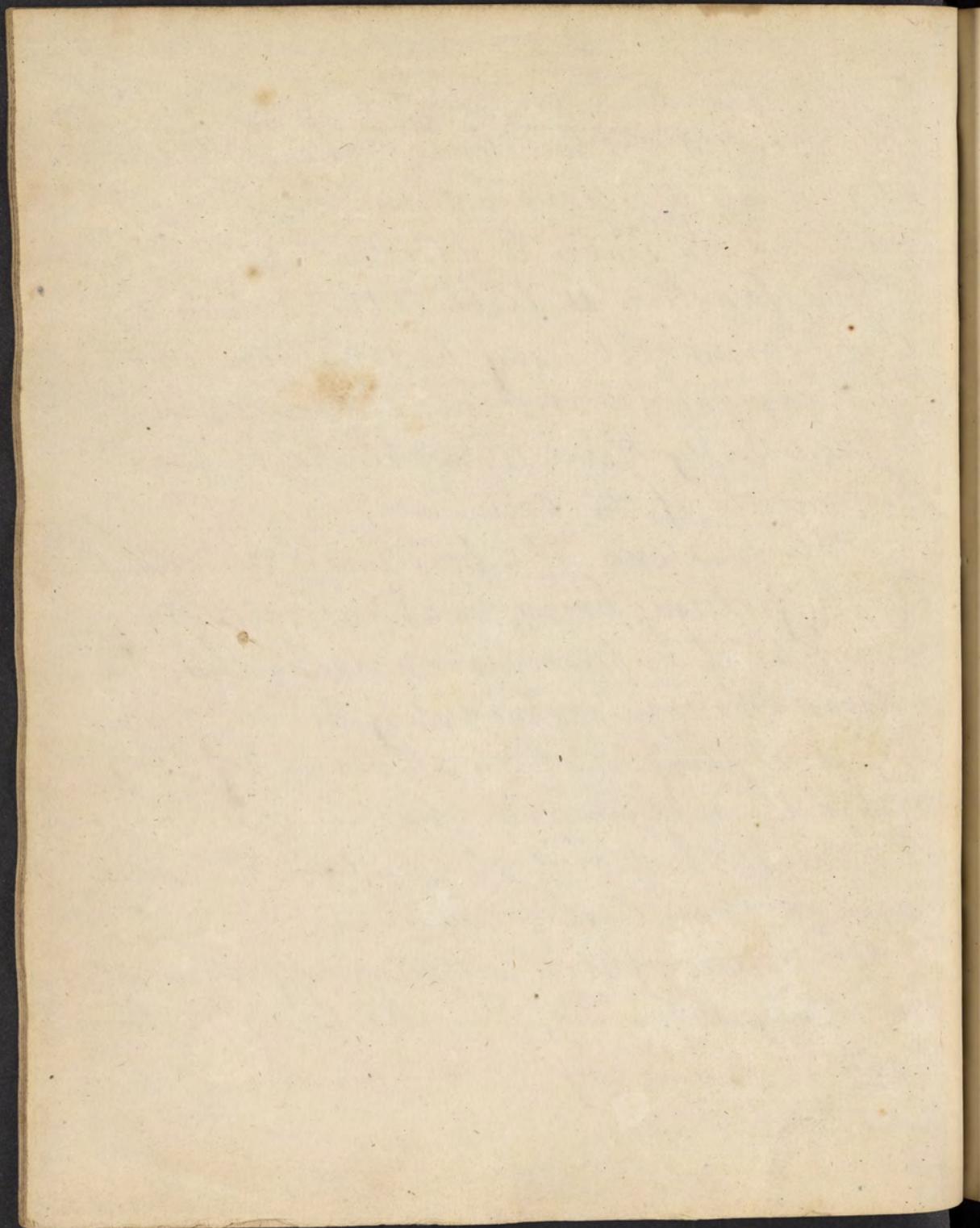
The bone-eyes are sometimes broken & all the intervening portions between the bone-eyes and neck are liable to accident.

This fracture is liable to the varieties of other forms; it may be transverse or oblique, compound or comminuted &c &c

We usually find them oblique & about the middle of the bone.

The existence of a fracture is discovered by the patient being unable to raise the limb, or if he succeeds in doing this, convulsive motions immediately occur, pain is felt at the point & it is shorter by 2 or 3 inches than the sound one. It may be bent at the point of fracture & form an angular projection forward.

The causes of these different appearances are easily explained, the shortening of the limb is caused by the contraction of the



Muscles on the posterior part of the thigh  
being stronger than on the anterior part &  
the leg is turned out by the weight of the  
foot.

The Surgeon has therefore to counteract  
the shortening of the limb.

1<sup>st</sup> The Angular projection.

2<sup>d</sup> The tendency of the foot outwards.

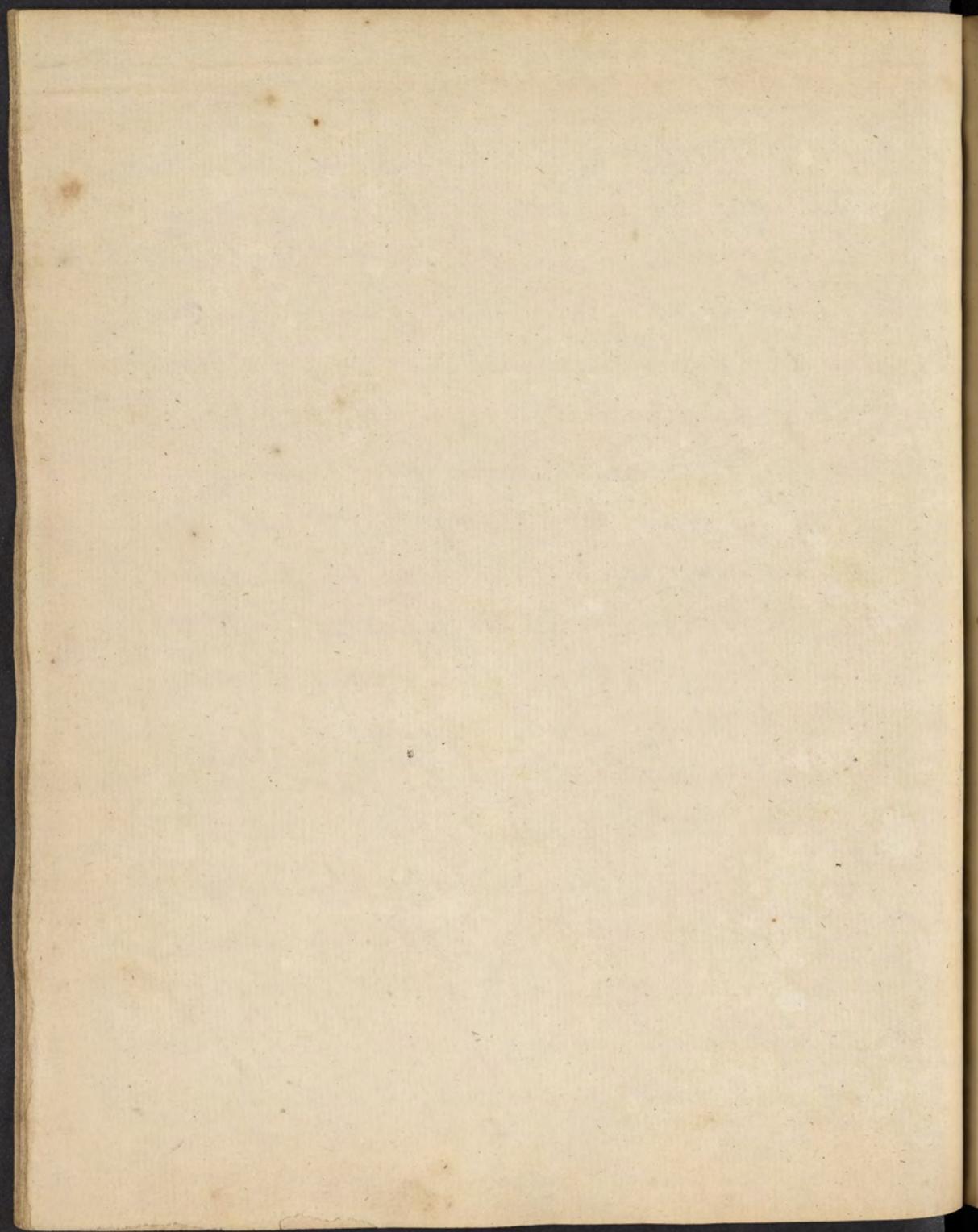
To effect these different purposes, many  
different modes have been recommended,  
these it would be useless to detail, & that  
only will be noticed which has been most  
beneficial - this is the Treatment intro-  
duced by Desault & enforced by Dr. P.

The first thing to be done, is to procure  
a suitable place, for the patient to rest upon;  
a feather bed should never be used for  
this purpose, because, altho' it would be  
comfortable to the patient at first, yet the  
feathers will soon be displaced and the

Doctor Physick's bed - is to be prepared -

part, will be on the Share bed or Sacking —  
A Share Matress with a hole in the middle as  
directed by Sir J Care is the best contrivance  
if it can be had and the part should never  
be allowed to use no more than one pillow,  
because if his head is high he will most  
probably be pushed down in the Bed &  
some displacement take place.

It is always necessary to have the whole  
apparatus at hand & most of it on the bed  
before the part is placed upon it; all that  
are requisite we will name in the order  
in which they are to be placed on the bed  
beginning at the head — Several pieces  
of tape are to be placed, so as to be under  
the patients leg when he is placed on the  
bed, & next the Splint Cloth (so called by  
Surgeons because in it are wrapped the splints)  
is to be spread, then a part board splint,  
next a bandage of strips, a long splint

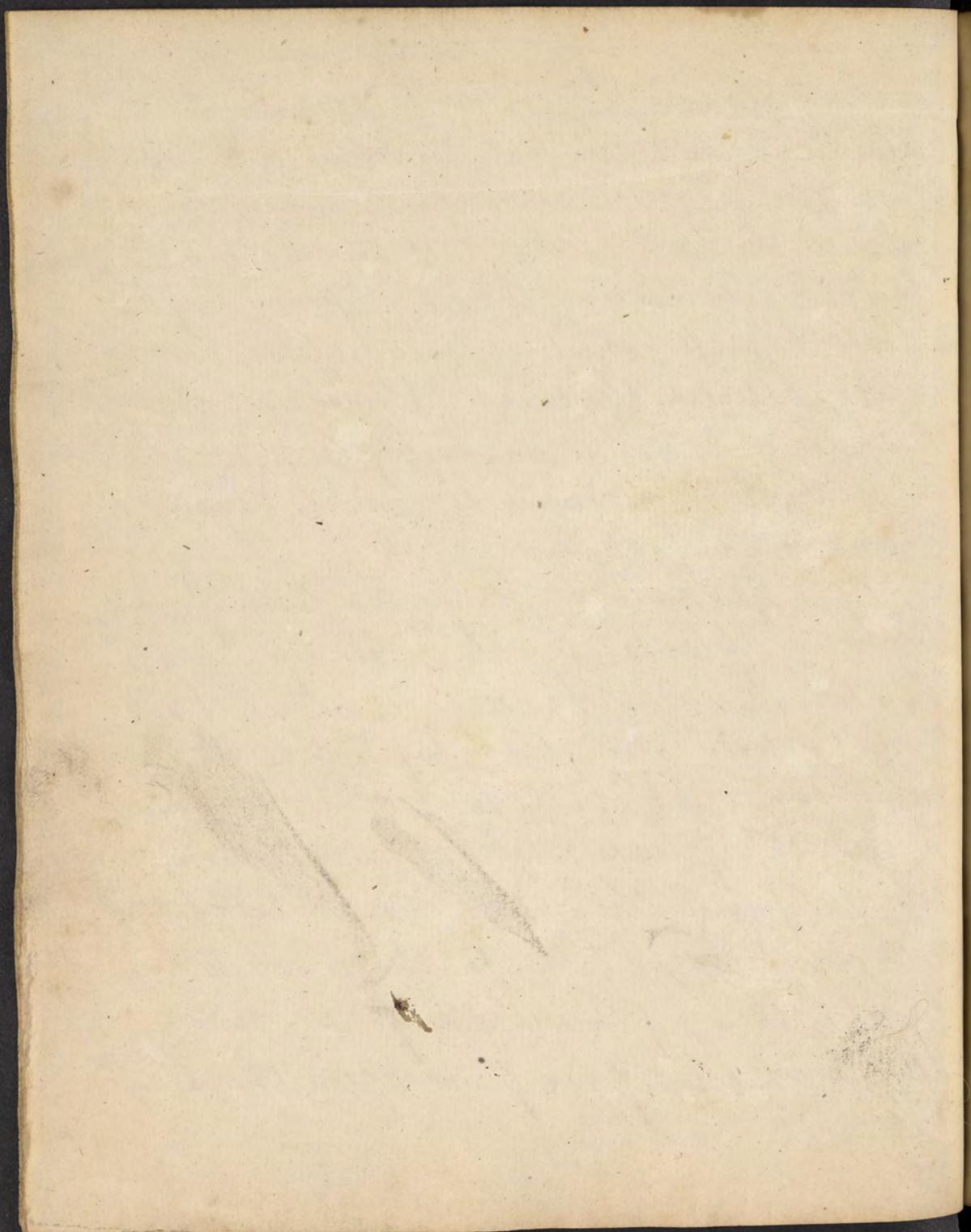


reaching from the Ankle, to a considerable distance beyond the foot, & another extending from the patrenium to the same distance beyond the foot as that last mentioned.

The counterextending band, which may be a silk handkerchief is now passed over the grain, between the thigh & scrotum, & the extending band is made by passing a handkerchief around the ankle & tying it under the foot.

The bandage of strips are first applied the long splints is now rolled up & the counterextending bandage is passed thro' the mortice holes at the top & secured, the extension is at the same time made.

Both splints being neatly rolled up & applied the interstices are to be filled up with bags of chaff the whole to be completed by placing the part board splint on the upper part of the thigh.



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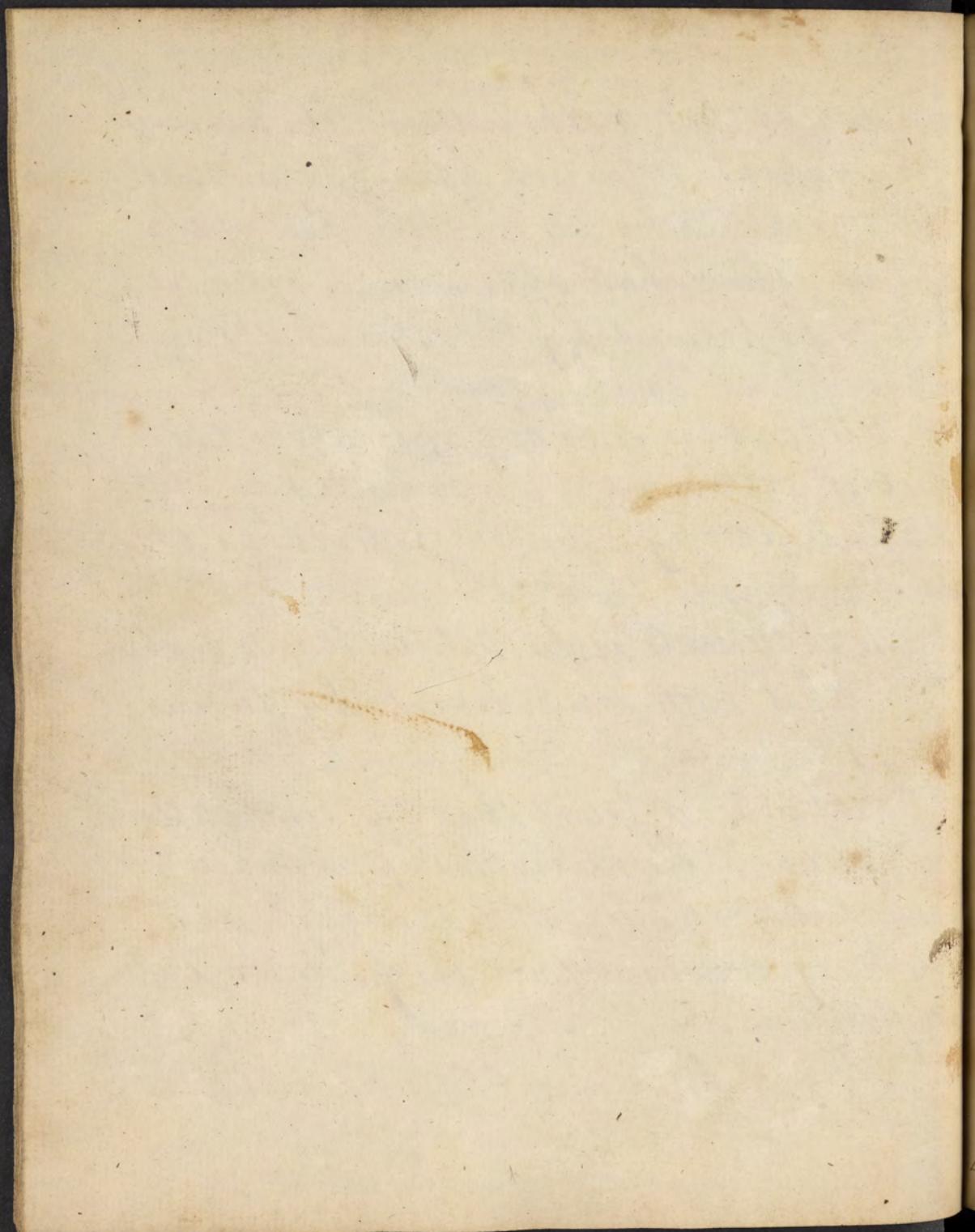
similar to that at the bottom, the bandage for making extension being passed thro' the mortice holes at the lower end of the splint; the whole operation is complete; & is to be secured by the tapes that were first placed on the leg.

A bandage is to be passed above the pelvis or around it in order to keep the splints steady, tho' not so tight as to inconvenience the patient.

In accidents of this nature, it is to be observed, that little can be learnt by feeling the fracture.

When it is found that the limb (after extension & counterextension is made) is of the same length as the sound one, we may conclude that the parts are in opposition.

It will be advisable to examine the



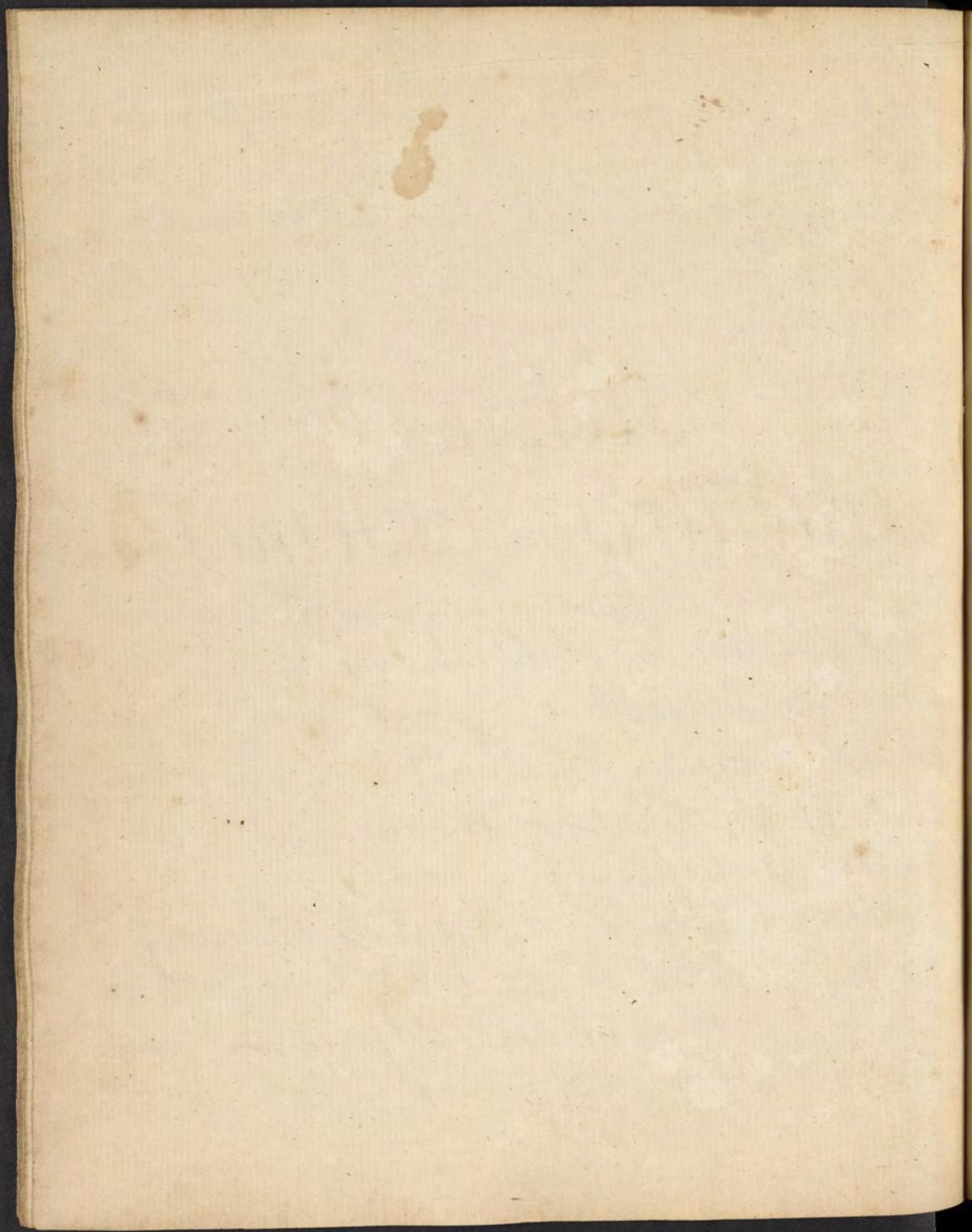
Anterior & Superior Spinous processes, and observe whether a line drawn from one to the other is direct, if so, the pelvis is not twisted & this adds to the certainty of the bones being in Opposition.

### Lect: 26<sup>th</sup>

## Fractures of the Femur cont

It not unfrequently happens that the action of the muscles is so great, that the Surgeon experiences much difficulty in reducing the bone, and even after this, if the fracture is oblique it will again be displaced.

Under such circumstances the unexperienced pract<sup>r</sup> is apt to apply the extending band, with considerable force — the patient soon complains & if the force



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be continued inflam<sup>n</sup>: & excoriation will be  
the consequence;

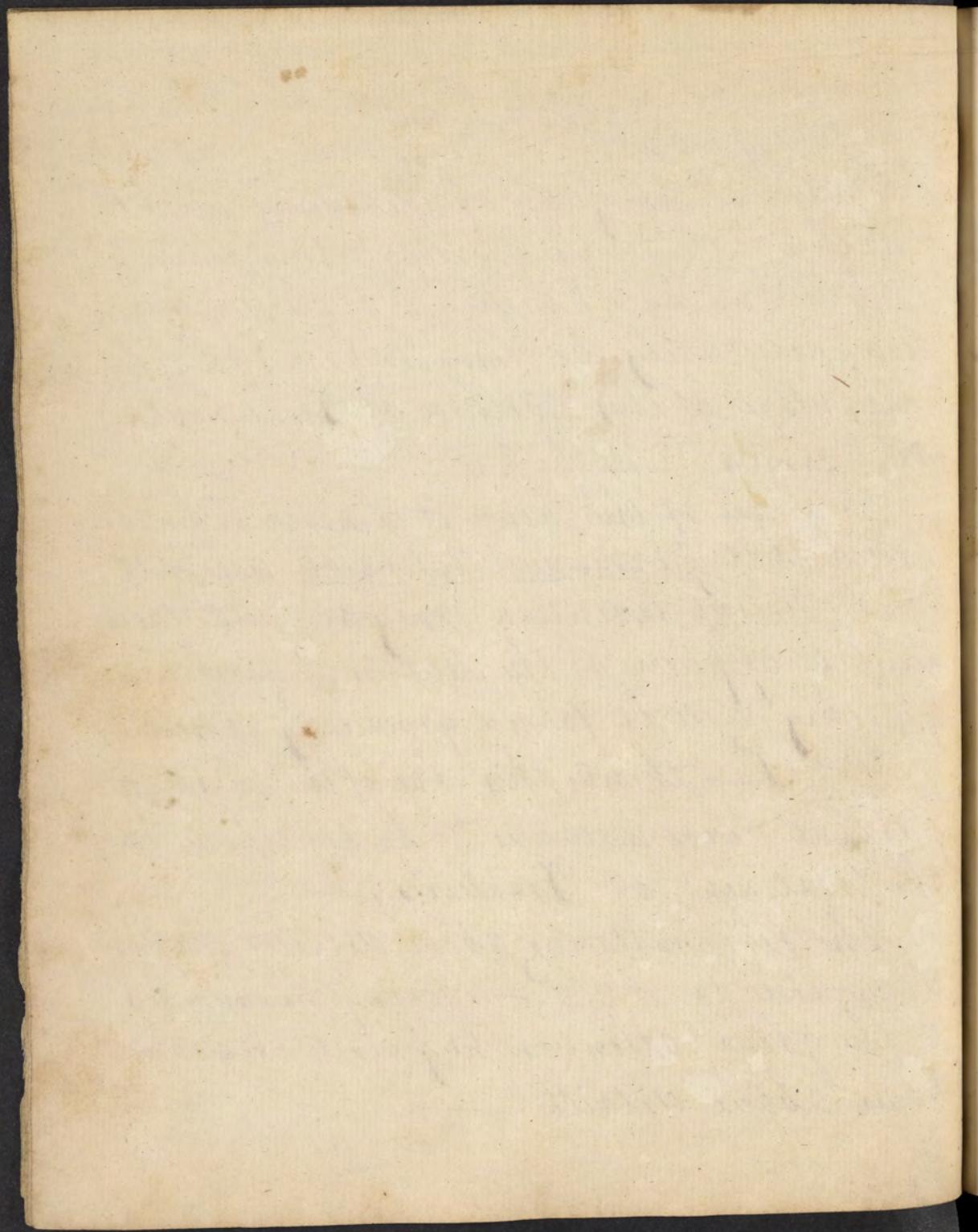
Continue this plan of treatment a little  
longer & the parts Mortify & slough.

The bandages & dressings of all kinds must  
now necessarily be removed & thus the whole  
advantage of this method of Treatment  
(or, defaults) will be lost.

In a case of this kind it is never to be for-  
gotten that permanent extension does not  
mean Violent extension, only so much force  
must be applied, as the Muscles at first resist,  
yet they will be yielded gradually to yield.

Dr P— thinks this one of the most im-  
portant circumstances to be considered in  
the treatment of Fractures.

The circumstance above detailed never  
occurred to Dr P— owing he thinks  
to the great attention he paid to the circums-  
tances above detailed.



previous to the application of the extending  
bandage it will be proper to moisten the part  
with spirits. — In addition to all this  
the bandage should be relaxed every day & the  
part rubbed with flannel or flesh brush,  
this acts as a stimulus to the vessels & increases  
the activity of the circulation, which was  
previously languid. —

In Children evaporation is apt to occur  
in consequence of the parts being continually  
wet by the evaporation of Urine, to avoid  
this cover the parts with soft buckskin,  
the counterextension Band to be of the same,  
stuff it with horse hair & dip it in warm  
oil & bees wax, it will be soft & fit easy —

Dr Physicks improvement on Desault's  
splint is attended with many advantages  
and in the first place, The splint of De-  
sault being little longer than the limb  
the strap or band for counterextension

Doctor Phynish has rejected the crutch like extremely

passes over the Os Femoris at an oblique <sup>40</sup> Angle & has a tendency to draw the upper fragment downwards, On the other hand Dr. P<sup>r</sup> acts upon the Pelvis in a line nearly parallel with the natural direction of the limb, this is owing to the counterextending bandage attached to the mortise hole near the Ailla - part of the counterextending force is made at this place.

The Crutch like extremity is to be covered with flannel to prevent it rubbing the soft parts.

Fractures sometimes (as above mentioned) take place at the neck of the Os Femoris.

It was the opinion of the Old Surgeons that fractures of the neck were accidents of very frequent occurrence & that luxations seldom or ever took place, to this opinion many Modern Surgeons have given their assent. But Dr. Physicks experience is directly

The fracture immediately below the trochanter major may be distinguished by the trochanter not moving at all when the leg is rotated.

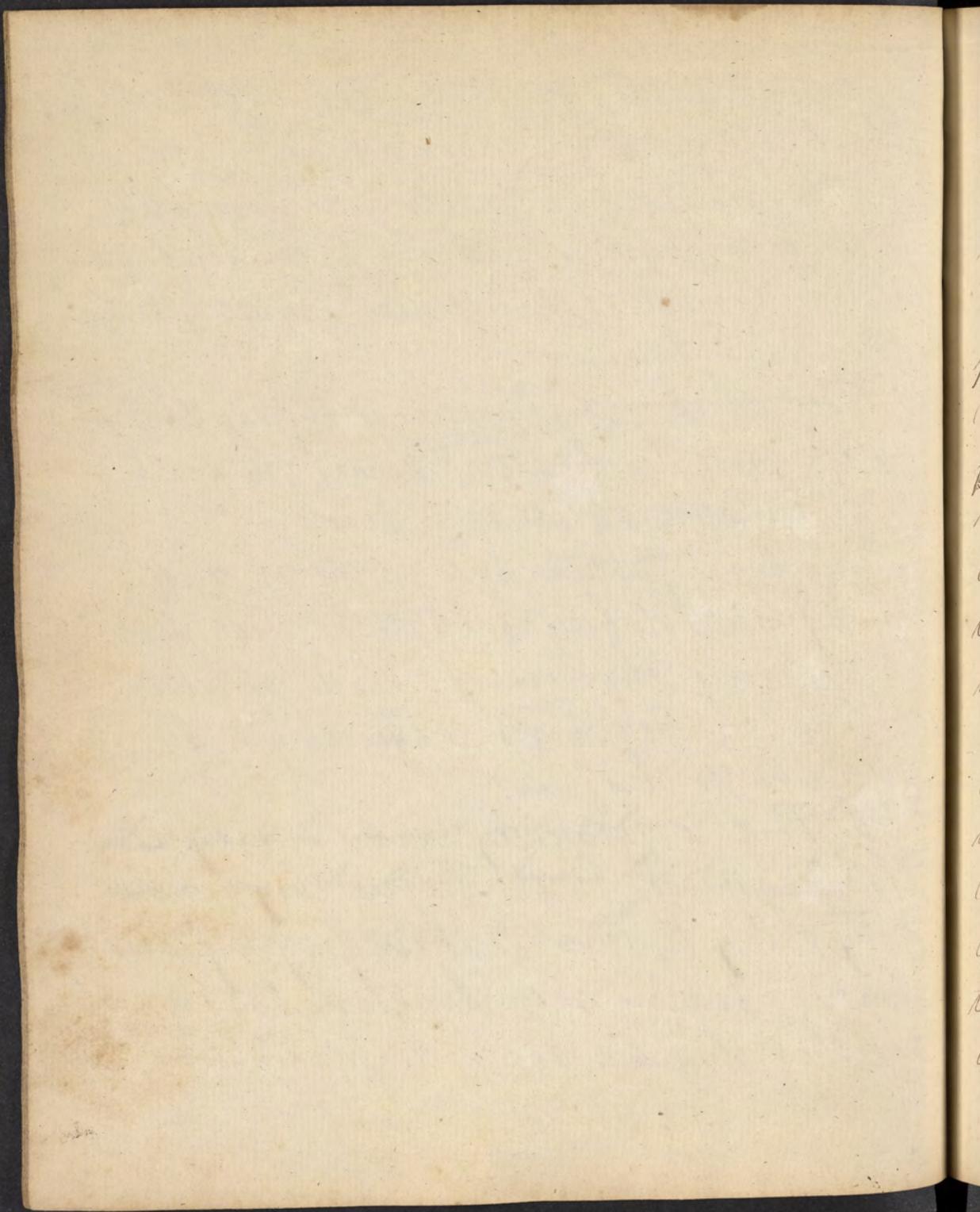
opposed to this, he thinks, luxations occur  
much oftener than fractures. 41

The existence of a fracture is generally  
determined by the shortning of the limb, pain  
at the moment of the accident inability to move  
the limb &c.

But the best diagnostic is to place the hand  
on the great trochanter & direct the limb  
to be rotated on its own axis.

This bony protuberance turns on itself as  
on a pivot whereas in its natural state  
it describes the Arc of a circle of which the  
neck of the Os femoris is the radius — In  
addition to this.

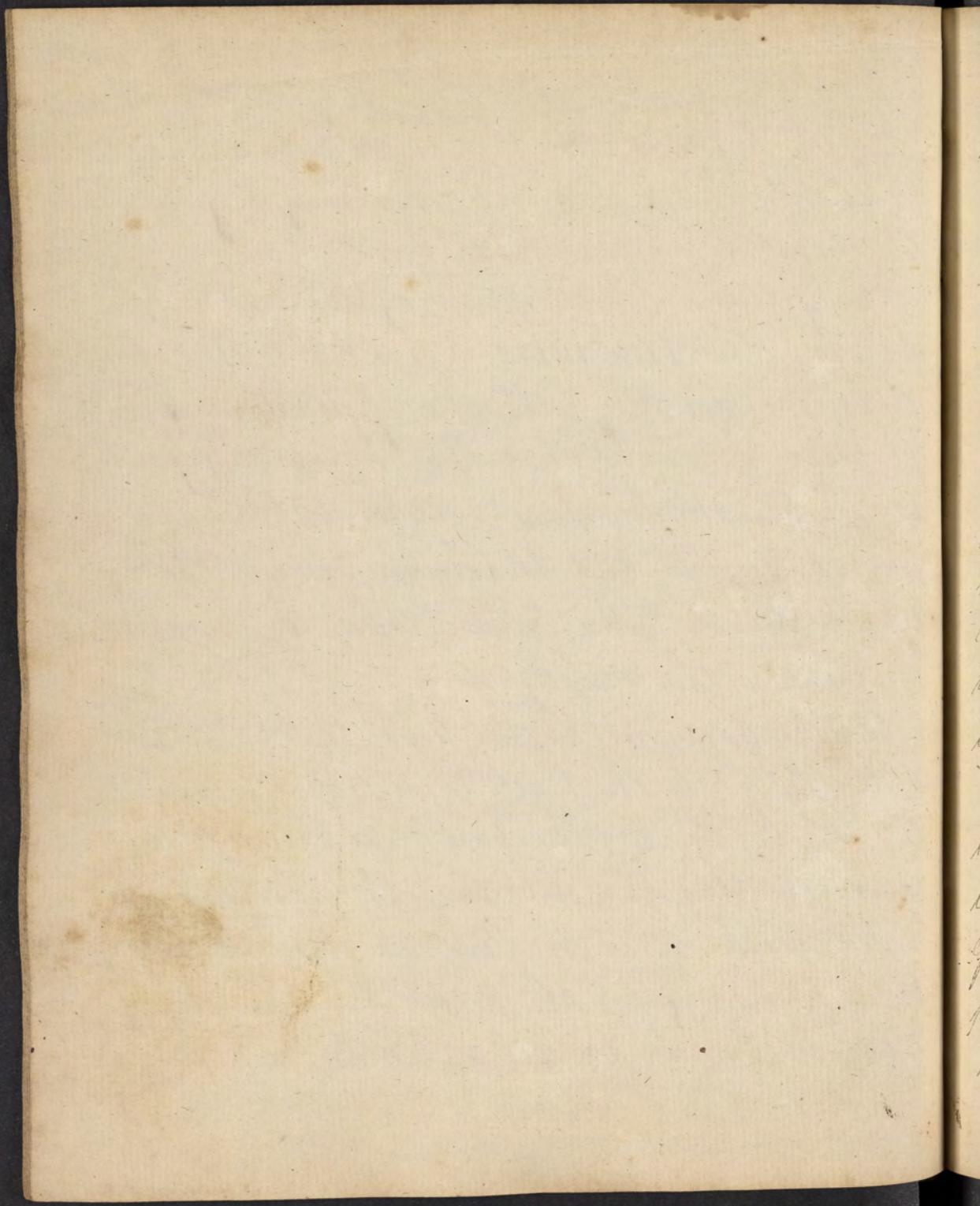
The foot is generally turned out; by taking  
the fragments in the hands they can be  
very easily reduced to their proper places,  
But no sooner is the Surgeon's hand remo-  
ved than they are again displaced.



If the fracture be within the capsular ligament it often happens that there is no shortening of the limb & in this case 2 or 3 days may elapse before the fracture is discovered.

Some patients will walk very well during this period; the treatment is similar to that above recommended viz Desautes Apparatus; If the fracture be in the Neck Union will take place, but when the fracture occurs within the Cestabellum a bone is seldom affected, Bony union never takes place when the fracture is within the cavity.

A case occurred of this kind to Dr. P. and after 10 years the patt. had not received the use of the Limb (the bone was shewed to the Clap) in this case native, as was found after death, was making an effort to supply the deficiency; for the neck had been totally absorbed. In all cases in which much



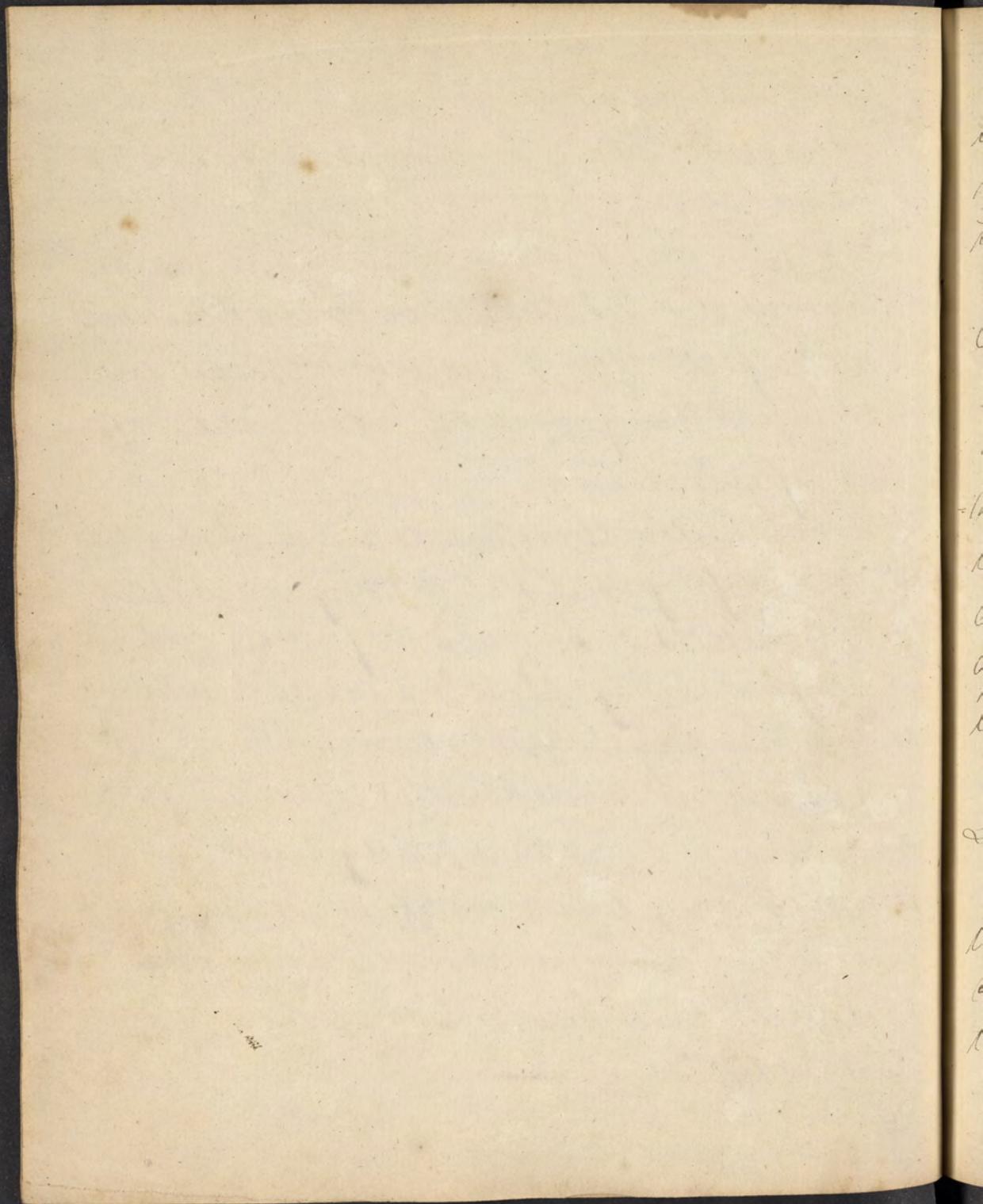
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injury has been received at the hip joint,  
the Surgeon should be cautious in giving his  
opinion. —

Dr. P. has seen a case in which several  
Surgeons decided that there was a fracture.  
But the part after a few days removed the  
bandage & thus proved the incorrectness of  
this opinion. —

When called therefore to a case of this sort  
it will be proper to state to the patient, that  
no fracture is to be found at present, yet  
in all probability there is a fracture, but  
that a few days will determine it. —

If the case is at all doubtful it will be proper  
to treat as if a fracture really existed, for if  
it prove only to be a contusion, yet the per-  
fect state of the rest that will have been  
preserved, will be of much advantage to  
the contusion. —

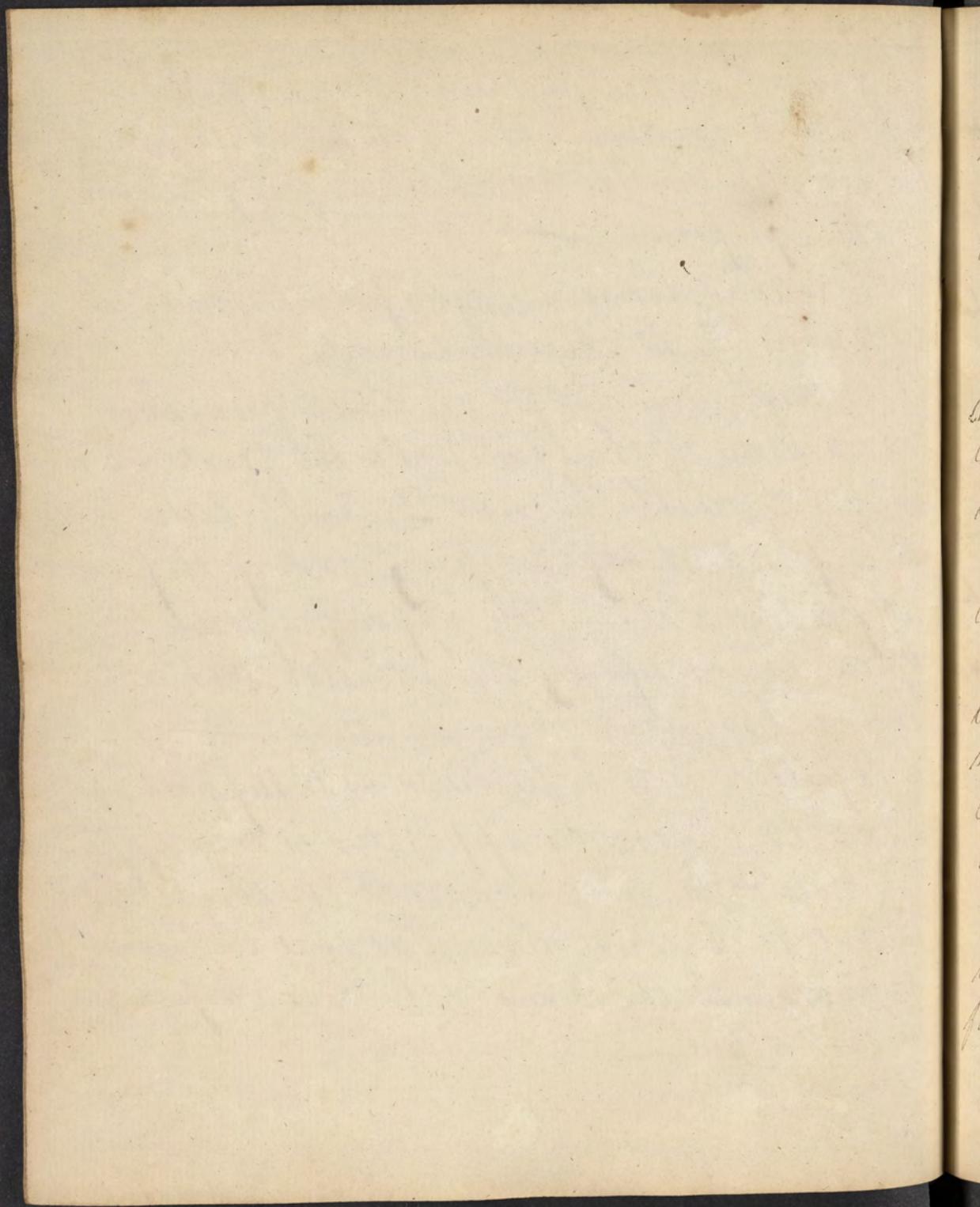


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It is of great importance to distinguish  
between a fracture of the Neck & luxation,  
much attention of course is necessary to be paid  
to the symptoms.

Fractures sometimes take place low down the  
Femoris, just above the knee, & the  
Treatment does not at all differ from those  
of the body of the bone, unless the fracture com-  
municate with the joint. In the latter case  
it is particularly necessary to keep the parts  
at perfect rest. The upper fragment is  
often drawn up by the extension, while the  
lower fragment is drawn down.

A pillow is to be placed so, as to support the  
Leg, & then Desault's apparatus is to be applied.  
It is to be recollect'd that the thigh & Leg  
is not in a direct line, but that the former  
converge at the Kne's & the Legs are parallel  
to each other.



In applying these splints, a chaff bag is to be used to fill up the intestines.

It is always to be kept in mind that our object is not so much to make a strait Leg, as a natural one.

One great reason, why the method of treatment laid down is not in more general use is, that few practitioners are acquainted with its mode of application.

Mr. Bell evinces by his observations that he never saw the apparatus applied.

Mr. Port recommends the best position & urges his arguments with considerable plausibility. But Dr. P. has seen it tried, and it is by no means so advantageous as the above noticed, as introduced by Desautel.

One great objection to the best position is that no plat. can continue on his side for so long a time, as is necessary for the union of the Os. femoros.

- 1 The fracture at the middle known by the angular projection &c.
- 2 The Fracture above the condyles by the projection ~~the~~ <sup>the</sup> Ham strings.
- 3 The Fracture immediately below the upper trochanter by the projection in the groin.
- 4 The Fracture between the trochanters by the trochanter not moving when the limb is rotated.
- 5 The Fracture of the neck near the trochanter by the trochanter moving on itself only.
- 5 Fracture ~~with~~ of the head by the trochanter moving in the arch of a circle.
- 6 The Fracture off of the trochanter by its mischievous

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+ By passing the finger along the skin a sense will be experienced at the place of fracture, if then the leg be bent a slight depression will be felt.

Lect. 27<sup>th</sup>

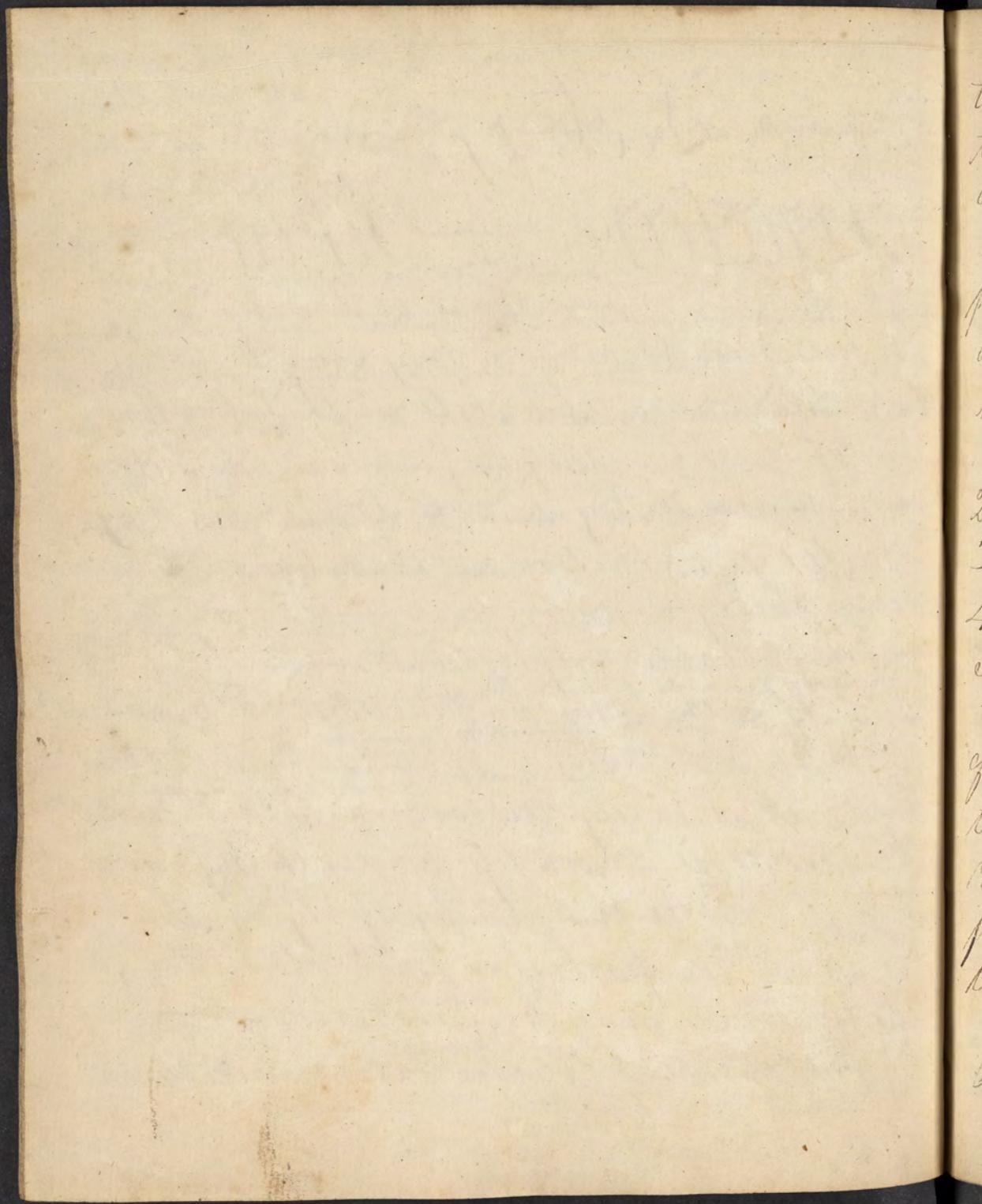
## Fracture of the Tibia

Sometimes both bones are broken and sometimes only one. It may take place any where between the Ankle & Knee

If the Tibia only is fractured, the Surgeon will most usually be able to discover it by careful examination, as the integument are very thinly covered, pain will be felt & most probable Crispation.

If both bones be fractured the limb will be shortened. If the fracture be oblique it is easily discovered as the inferior fragment is drawn up under the Superior one. But in this case by applying the hand at the posterior part of the Leg the fracture may be discovered.

Extension & Counter Extension reduces



the parts to their proper places. & then they are  
to be secured in this situation by Bandages  
and Splints. 47

The Apparatus necessary to be procured,  
previous to our commencing the reduction  
of the fracture consists of  
1<sup>st</sup> a hair Mattrap Sheet & a place 3 pieces  
of tape so as to be under the fracture —  
2<sup>d</sup> A pillow to be placed on the tape  
3 A Bandage of Strips  
4 Pastboared Splinters & soaked in water  
5 Another Bandage of Strips.

Extension & counterextension is to be made  
from the Ankle & knee and the dressings are  
then to be applied, commencing of course  
with last placed on table or bed, the  
pillow may be retained by two Splints of  
thin board.

To guard against pressure at the heel  
Adhesive plaster spread upon soft leather



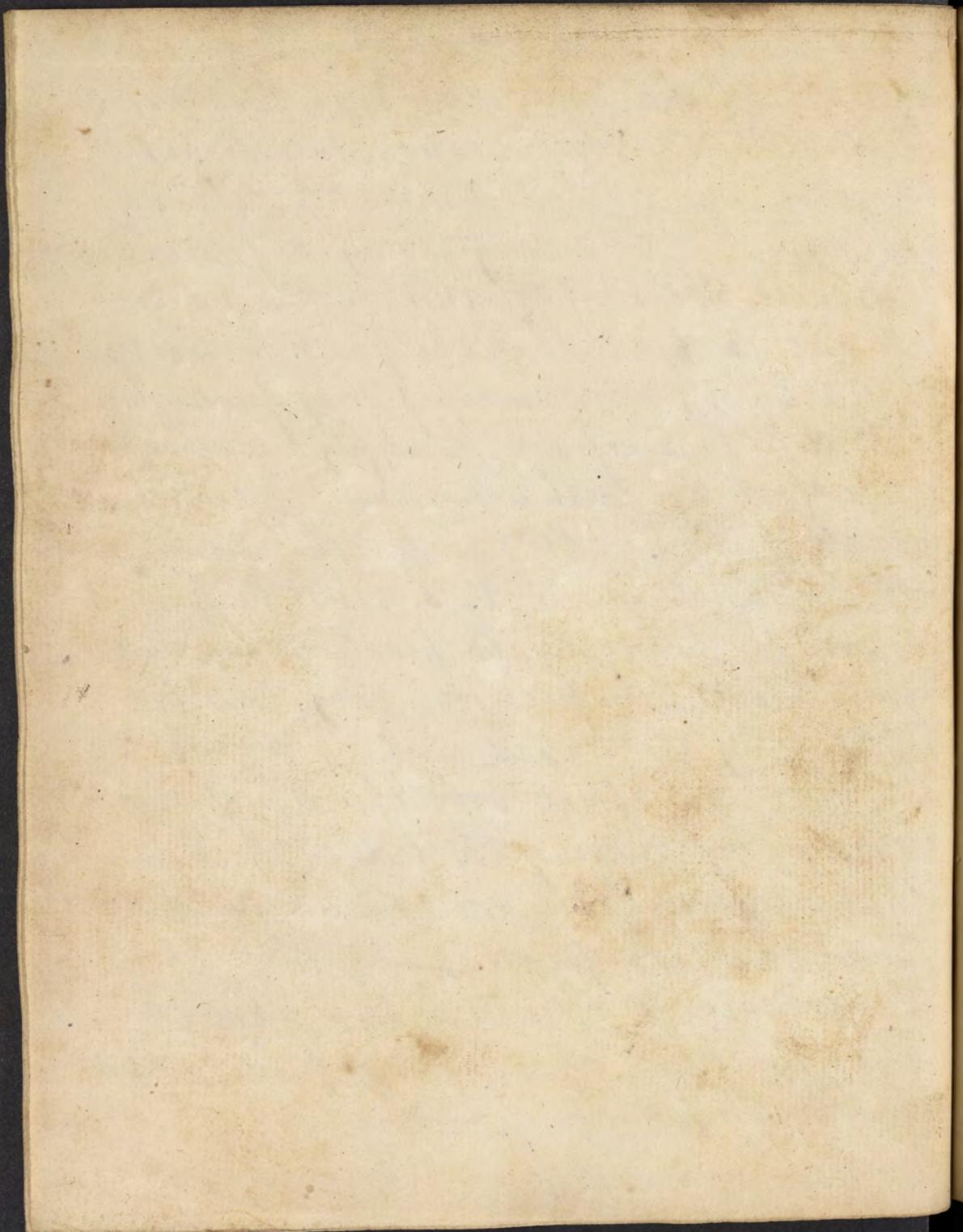
Applied at this part will sometimes be  
efficacious. — The irritation sometimes  
increases and even ulceration & sloughing  
will ensue. — This may easily be prevented  
by several folds of flannel with a small  
hole cut tht, so that the parts formerly  
pressed upon, are now completely protected.

It will be necessary to apply a bandage  
to the foot in such a manner as to pre-  
vent its slipping too much to the outside.

If Inflamm<sup>n</sup> ensue V. S. must be had  
resort to, Purging in practice are always  
inconvenient & its place can very well be  
supplied by the lancet. —

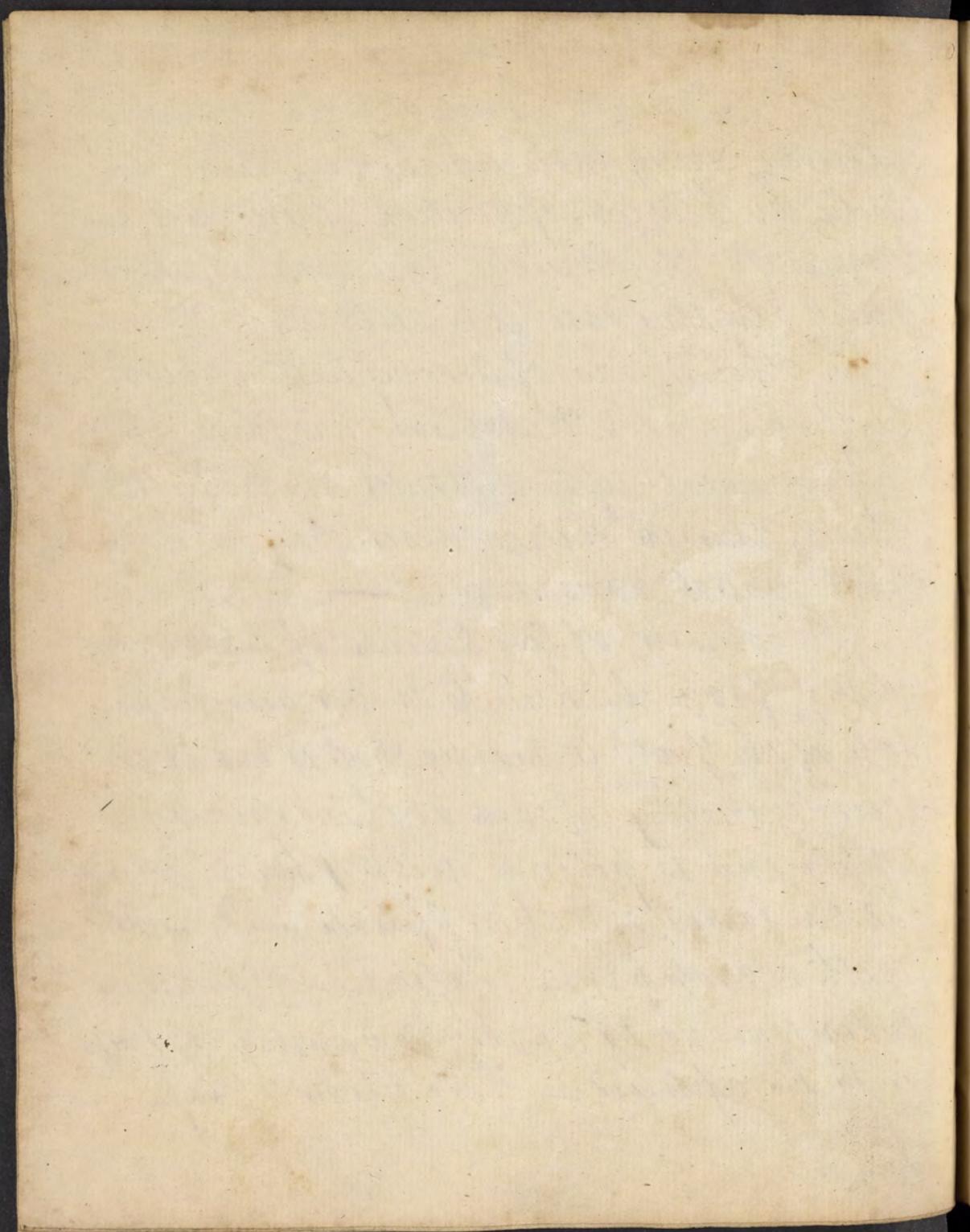
We may effect or rather assist this  
remedy by raising the feet of the bed  
& thus retarding the circulation of the  
blood thro' the parts. —

We examine it often to be sure, that there  
are no pressure upon the soft parts, as this  
would cause sloughing. —



The Treatment above detailed answers <sup>49</sup> extremely well, provided the fragments can easily be kept in opposition — But not unfrequently the Musely will cause a displacement & in this case it is desirable to possess some other mode of accomplishing the purpose. — Dr. Hutchison has made an improvement upon Desault's method of treatment, this in certain cases may be used with much advantage. —

It consists of two splints of wood reaching from the knee to inches below the sole of the foot. A mortice hole is cut in the lower extremity of each of these splints & the upper end is pierced with 4 small holes. At the lower end these splints are connected with a crop bar. — Extension & counter extension is to be made, a bandage of strips is to be applied — Two pieces of tape are

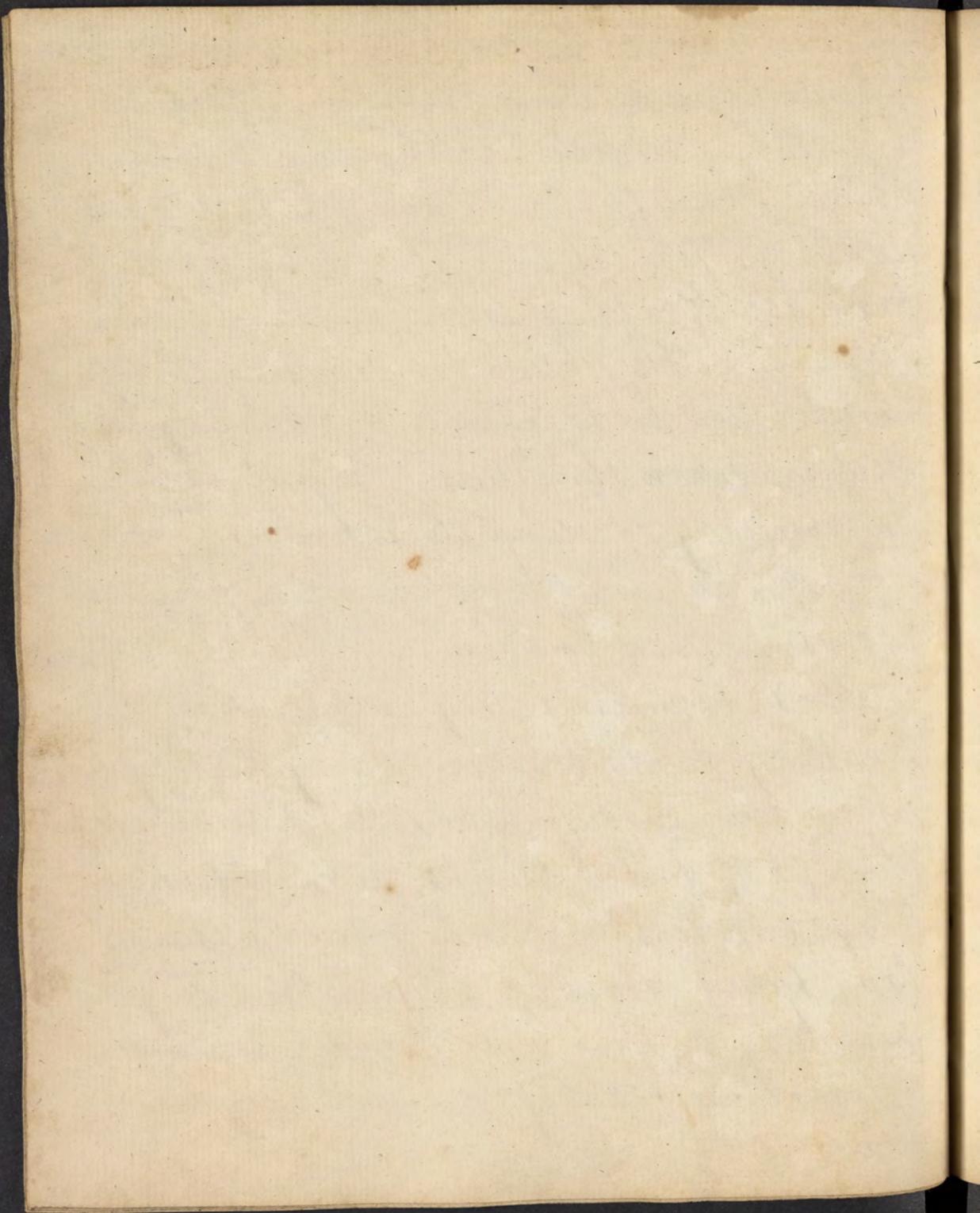


to be secured on the Leg by various turns of a roller — A silk handkerchief is to be passed about the Ankle over the instep and under the foot, it is to be secured by the cross bar for the purpose of making extension. — The roller for securing the tape should not be so tight as to cause any great pressure upon the vessels; Bags of Chaff will be necessary to fill up the interstices. —

By this means of treatment much permanent extension may be made. —

It is sometimes very inconvenient, particularly if the fracture is very high up, under these circumstances Dr P. never uses them, & in fact he thinks when extension & counterextension is to be made Desaules long splint reaching a little above the heel may be used with advantage —

Sometimes it happens that only one

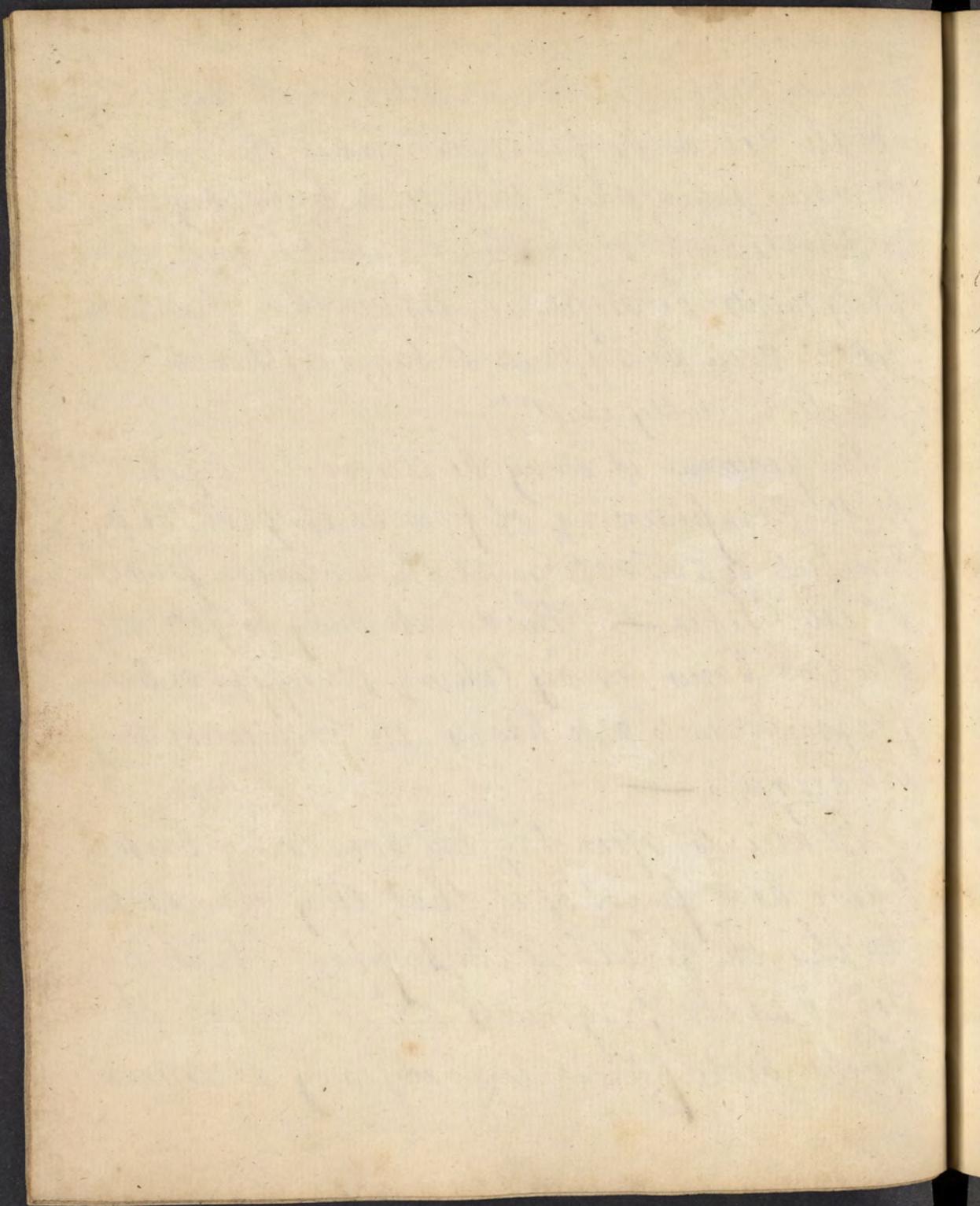


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bone is broken either the Tibia or the Fibula.  
If the Tibia be fractured while the Fibula  
remains uninjured, there will probably be  
no shortening of the limb neither will the  
fragments be displaced, under these circumstan-  
ces it will be difficult to say whether a  
fracture really exist.

In general it may be discovered by the  
patient complaining of pain at the part, or by  
careful examination at the anterior part  
of the Tibia — The chink may be felt at  
the two bones or by taking the upper or lower  
fragment into our hands, the crepitation may  
be heard.

Patients often say the bone is not broken  
& give as a proof of it that they can walk  
In this the Fibula is the support of the  
leg & as the fragments are in contact it  
might be supposed unnecessary to do more



than merely keep the part at rest, But this is a mistake & should be guarded against & the whole apparatus is to be applied.

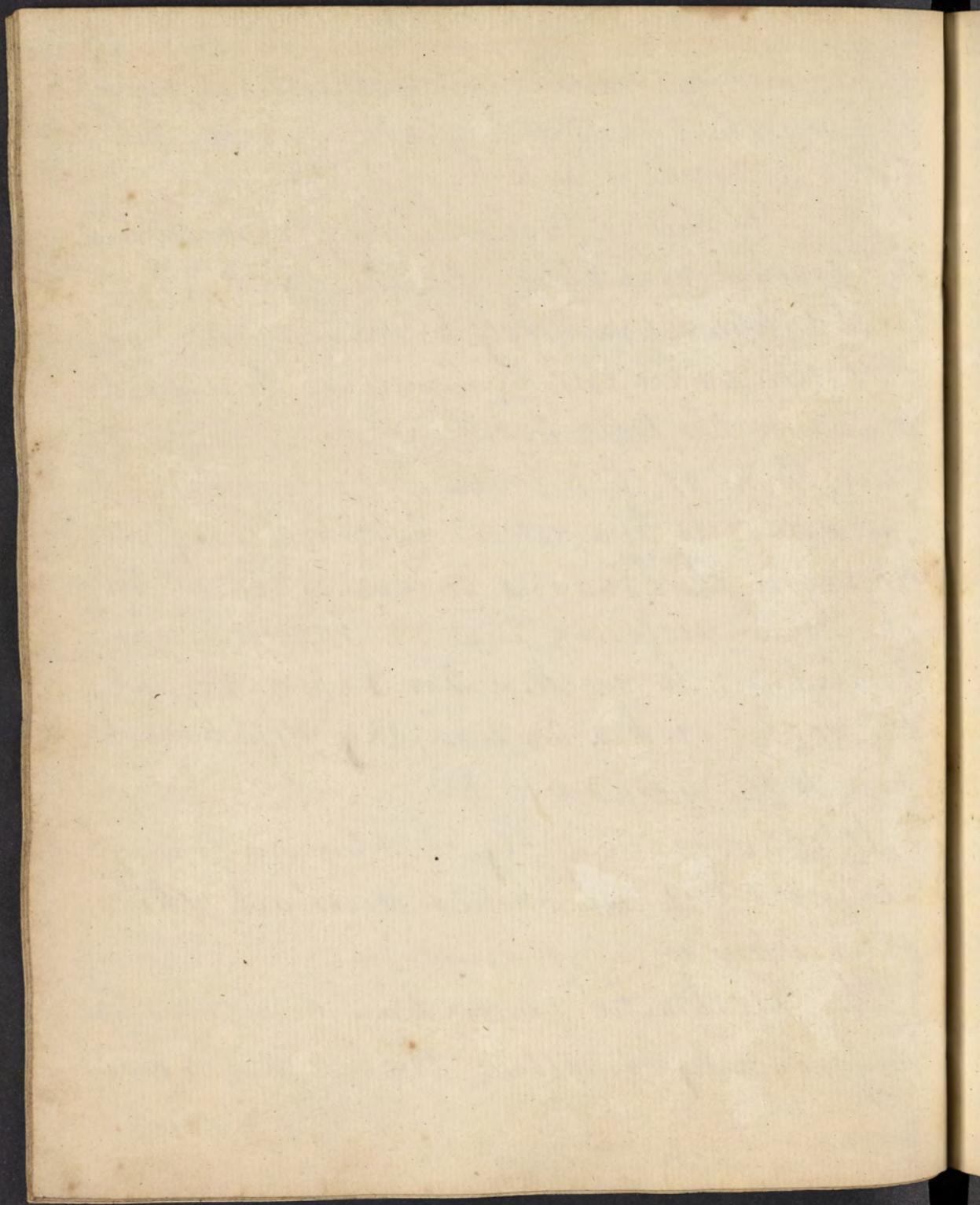
If this is neglected the fragments will rub against each other, pain inflam<sup>r</sup>. and even suppuration may be the consequence.

It will under these circumstances be difficult to induce the part to submit, unless we convince him of the existence of the fracture.

A case was here related in which the part removed the bandages as soon as the Dr. left the house declaring that the surgeon was mistaken; he walked 2 or 3 times around the room, when an unlucky step brought him to the ground.

It is proper to apply the bandages loosely at first, lest we should diminish the inter osious space.

The treatment under these circumstances is precisely similar to that made use



of when both bones are Fractured.

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Lect: 28<sup>th</sup>

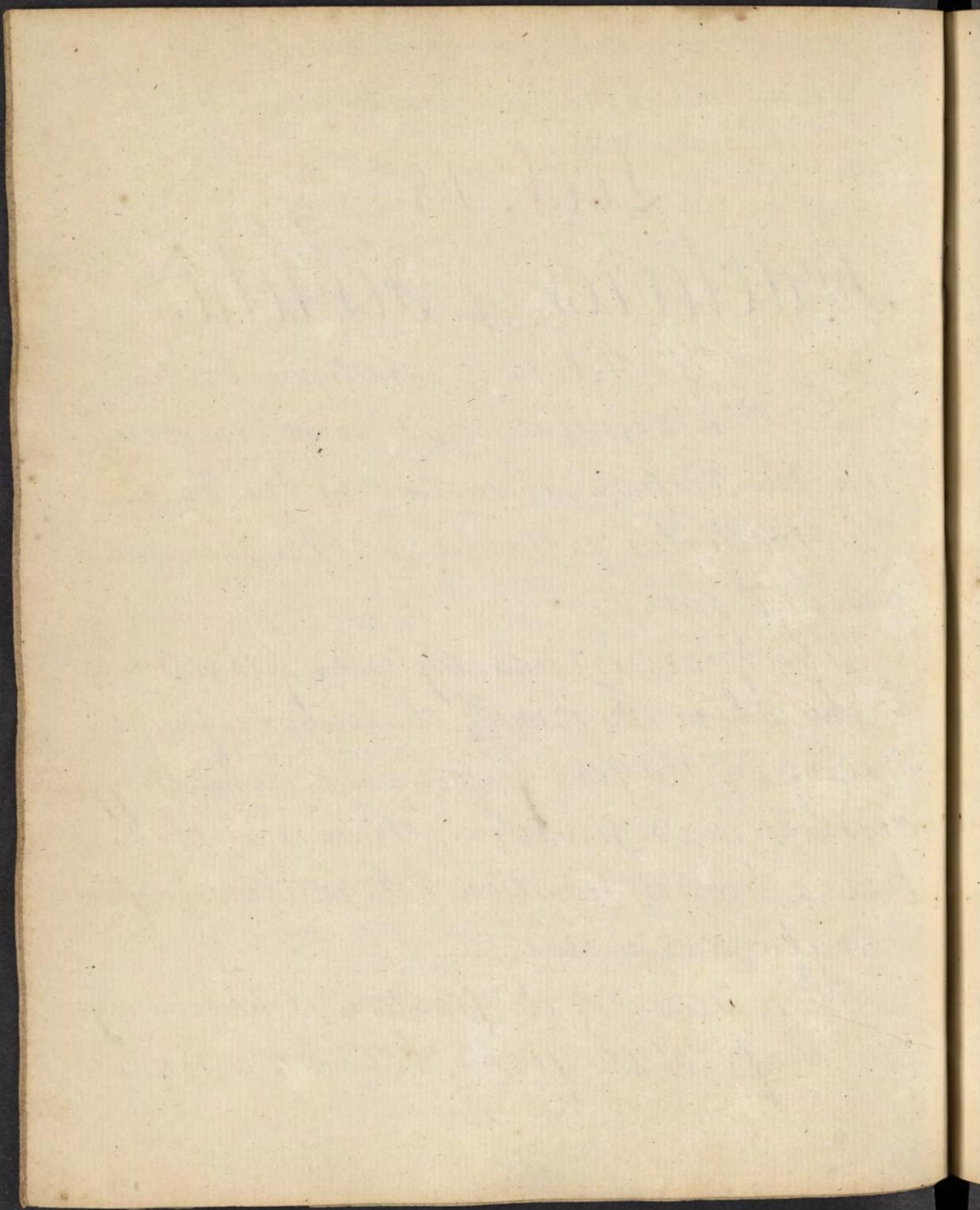
## Fractures of the Fibula.

The Fibula is sometimes broken alone - this accident arises most generally from the violent Abduction of the Foot. -

The Malleolus extensus is at the same time crushed out. -

The fracture usually takes place 3 or 4 inches above the joint; the lower fragment moving in, the foot passing out, while the upper remains in its situation, there is at the same time a partial luxation & the interosious space is much diminished. -

The existence of the fracture is known by the shape of the foot, the ankle is rounded.



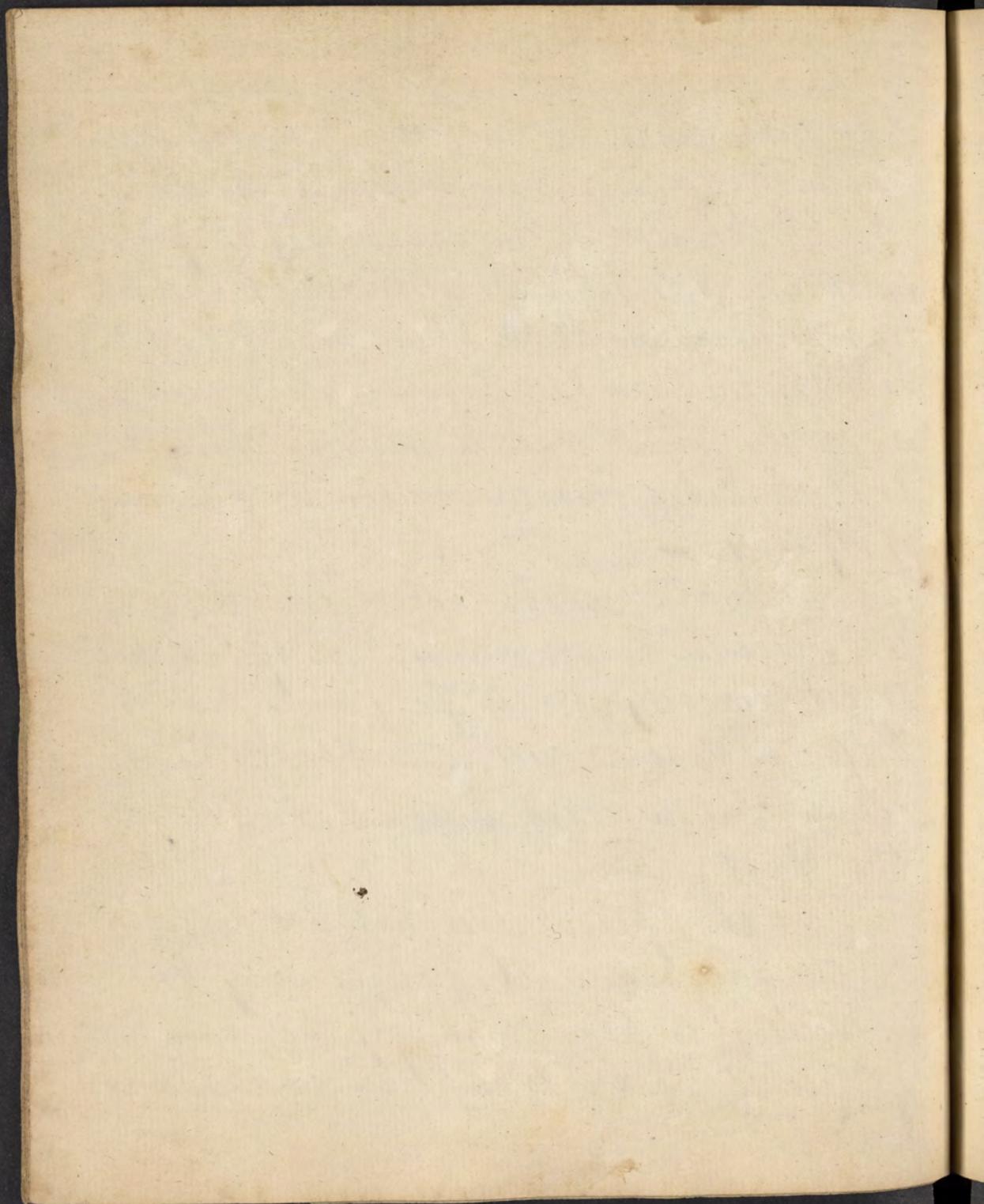
on the inside while there is a corresponding depression on the outside; the Patient is also unable to perform any motion at the Joint.

The Treatment in this case is very simple, extension is to be made at the foot & heel, and counterextension at the Knee, by this method both the levation & the fracture are reduced; as in the former case it might be thought that the tibia would answer the purpose of Splints. —

But as in the former case this operation would be erroneous, the Splint not to act directly on the fragments but to keep the Foot at rest. The Splint of course should reach beyond the sole of the foot. —

As the Splint does not act directly on the fragments, the patient may be unwilling to have them applied. —

Now if we are to explain our reasons



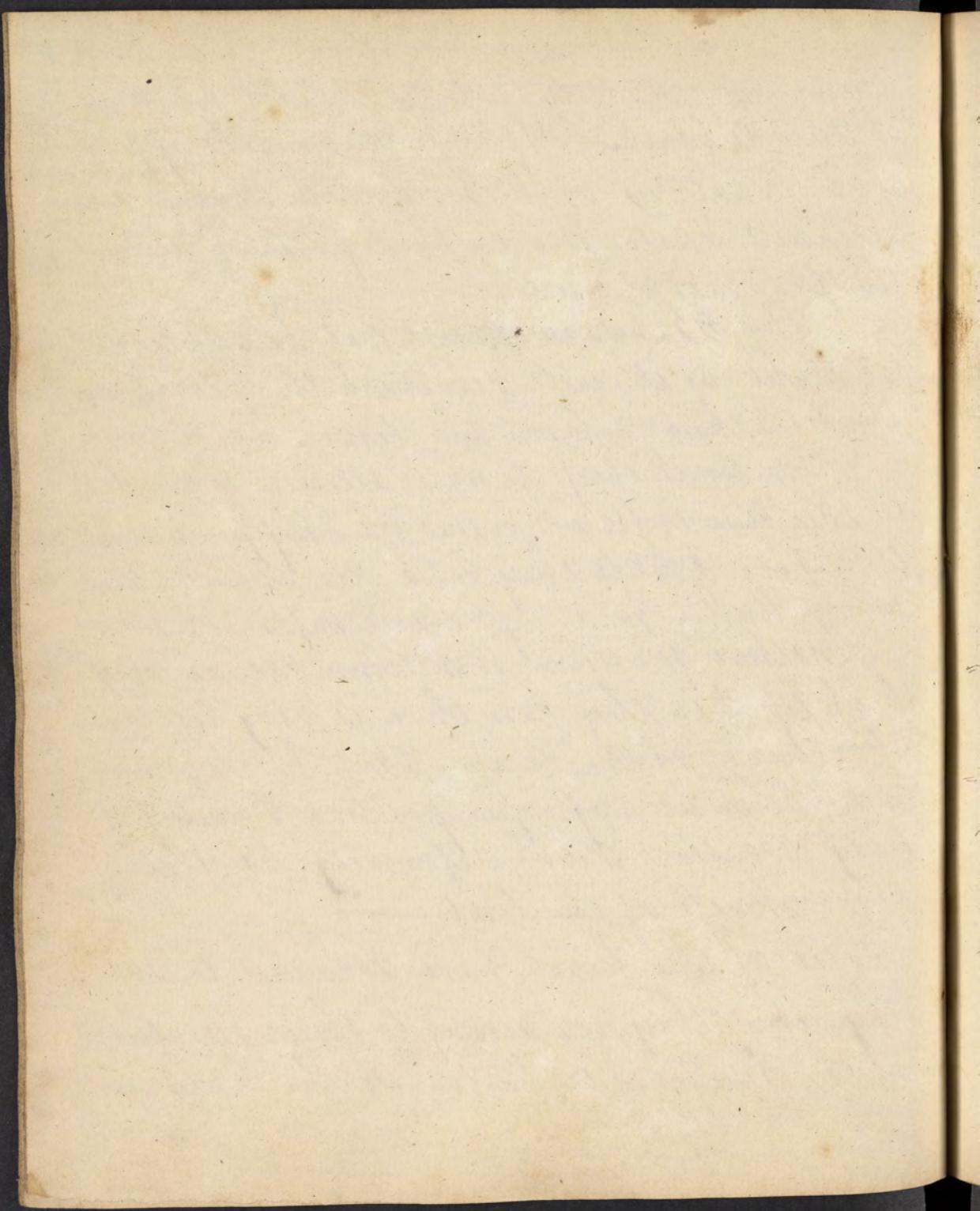
to him, his unwillingness will cease & he will  
at once submit. Splints &c are to be applied  
as in fractures of the Tibia. The limb is to be  
extended & retained in that position until  
the fragments unite. —

The Bandages must not be applied  
too tight as it will diminish the extorasy  
space & thus deform the limb. —

Sometimes the patient is allowed to walk &  
in this case inflam<sup>n</sup> comes on & suppuration  
ensues. In all these cases we should attend  
to the Ankle joint & prevent inflam<sup>n</sup>. —

Another fracture sometimes occurs very  
high up & in this case there is very little  
shortening of the limb, But the fragments  
may be in an improper position & will pos-  
sibly occasion much deformity as well  
as weakness of the limb. —

Cases of this kind have occurred to Dr.  
Physick, they are owing to the inattention  
of the Surgeon who forgets the knees are



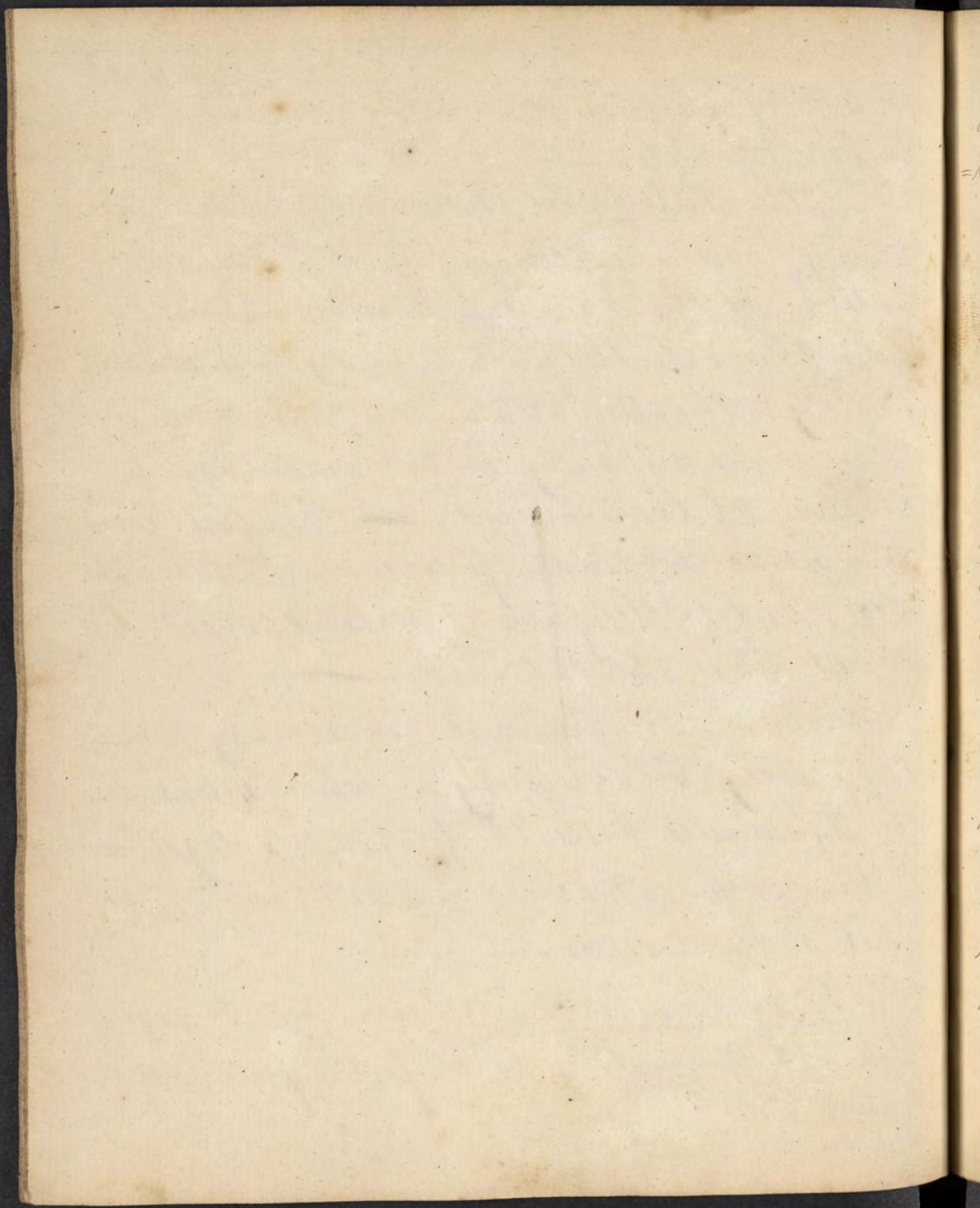
to approach each other & that the Legs are  
to be parallel. —

Opus Patilla is sometimes broken by  
heavy bodies falling upon it or by the  
action of the extension Muscles. —

In this case the pat. usually fails imme-  
diately; if called at the time of the accident  
there is no difficulty in determining the  
nature of the accident. — Opus pat. loses  
in a great degree the power of extending the  
leg, but in keeping it strait & moving side  
ways she is able to walk. —

It may be fractured transversely longi-  
tudinally, or obliquely — When Transverse  
the ligaments hold the fragments together  
& thus some extension can be made, but  
this soon gives. —

If Longitudinal little else will be requi-  
site then moults to keep the patient

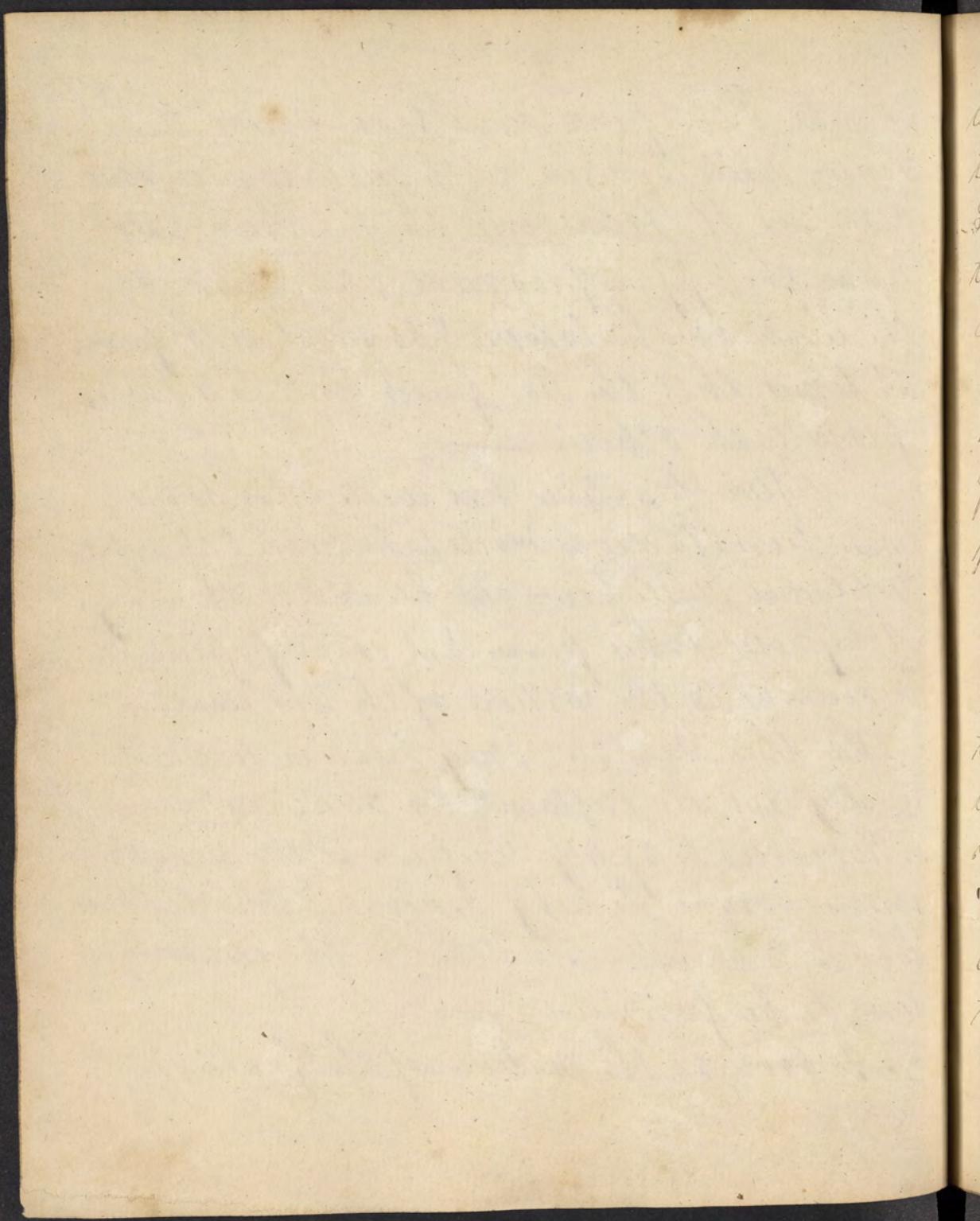


at rest & the parts will soon unite, discon-  
tinent, will be used with advantage in this  
case. — If Transverse the extension acts  
upon the upper fragment & the weight of  
the limb on the lower & so great is the power  
at times that the two pieces will be 6 inches  
from each other. —

After fracture has existed for some  
time timefaction will take place & the vessels  
ruptured will pour out blood — in this way  
Achynosis takes place & it is impossible to  
decide as to the nature of the accident —  
In this case our only plan is to wait  
quietly until inflam<sup>n</sup> & see subsides. —

Were we to apply pressure at the time, the  
effects might be very serious — the leg how-  
ever is to be extended & the Antiphlogistic sys-  
tem to be pursued. —

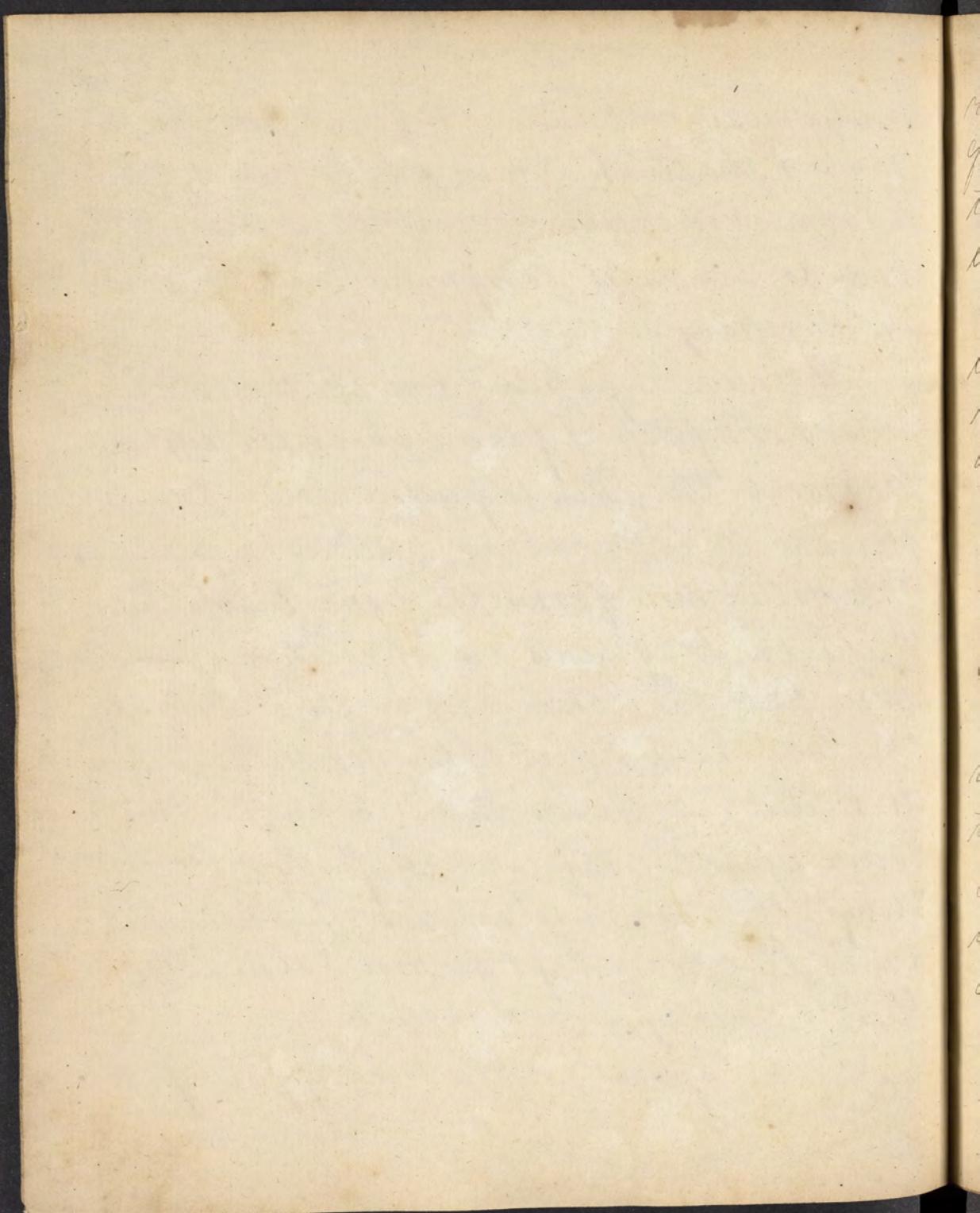
As soon as the nature of the fracture



is determined, the Leg is to be extended on the thigh & the thigh flexed on the pelvis, the Surgeon may easily reduce the fracture, to keep them so bandages compresses and splints are necessary.

A Roller is passed from the Foot to the Kne a compress is placed above the upper fragment the Skin is pulled down so as to prevent it intervening between the fragments. The roller now forms the figure 8 and thus keeps the fragments in opposition. — then pass the roller one or twice around the wrinkled skin of the Patella to prevent its swelling — we are now to continue the roller up to the hip and the patient will ask "why?" the answer is evident, The Muscles are in this way kept at rest & thus loose their tendency to contraction —

A long splint is now to be applied poste-



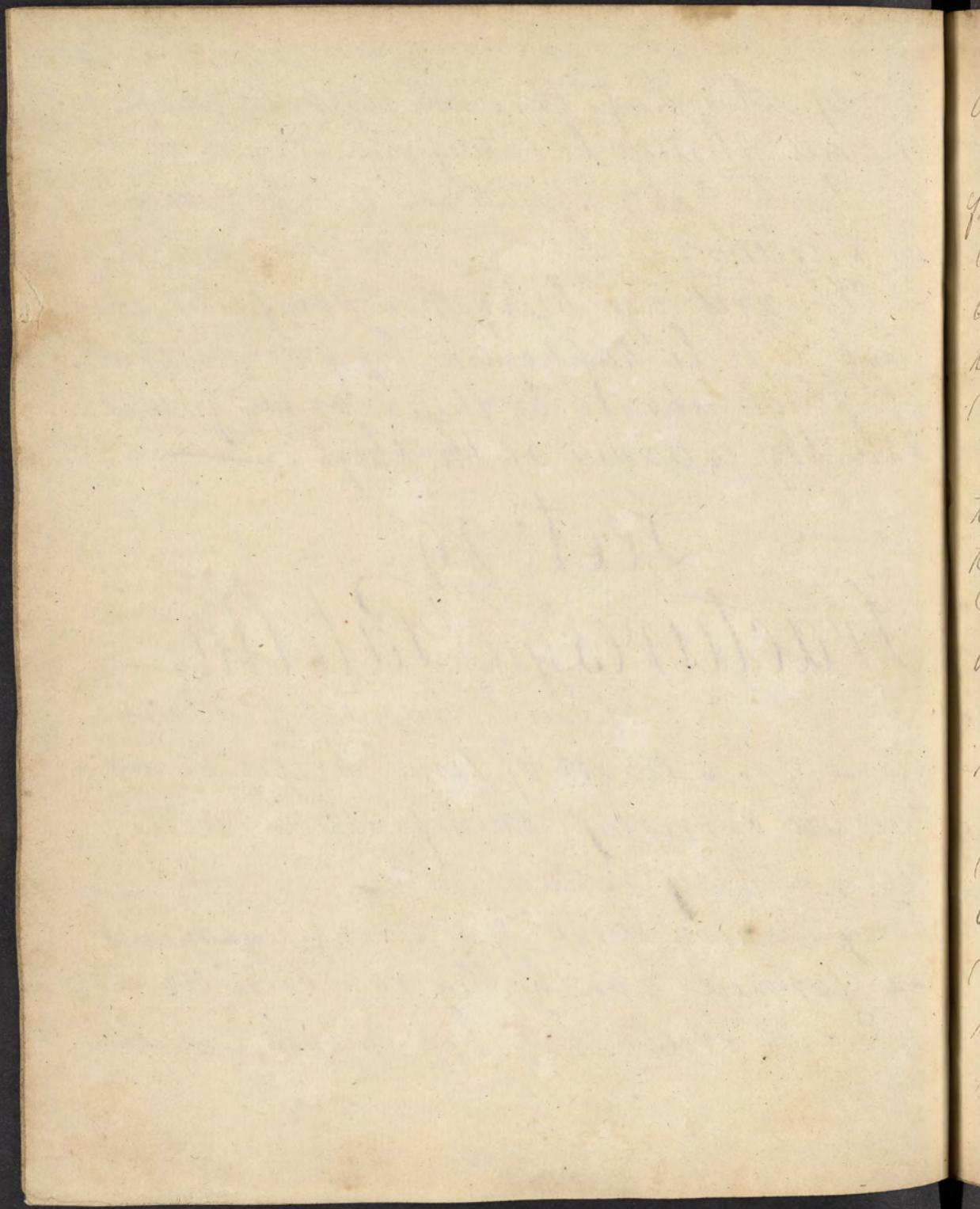
morely, this keeps the limb extended, Soft  
gauze should be interposed between it &  
the Limb & this Splint &c is to be retained  
by a roller.

The dressings being now completed, the  
limb is to be supported by pillows that  
the thigh should be flexed on the pelvis  
& the leg extended on the thigh.

## Lect. 29<sup>th</sup>

### Fractures of the Patella

If this accident be not dis-  
covered for a length of time, or if it be not  
treated correctly, the separation will  
remain very considerable. As no  
bony union exist yet strong ligaments  
are formed and the Leg can be extended  
But in order that these should act to



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Advantage from management is necessary  
the part after the subsidence of inflam<sup>n</sup>,  
find it very inconvenient to move the Leg be-  
comes satisfied with the recumbent posture  
and loses all desire of moving, he attributes  
his inability to move about to debility and  
weakness of the part. —

Now the management above alluded  
to is to induce the part, to make an exer-  
tion to move the limb — we must assure  
him that the muscles have lost the power  
only thro' the inactivity to which they  
have been subject & that they will regain  
their power by a little practice —

Dr. P. here related a case of a Lady  
whose Patella had been fractured; after  
the inflam<sup>n</sup> had subsided & union appa-  
rently taken place, it was found that  
she had lost the use of her limb  
(under these circumstances she applied)

The treatment consists in extending the leg -  
applying a roller from ankle to the groin -  
then applying after bringing down the displace-  
ment - compresses are to be applied above &  
below. The limb is then extended on Drury's  
Splint which consists of a thin board, long  
enough to extend half way up the thigh & down  
the leg - ~~2~~ and one foot & a half broad -  
the thin board is attached to a thick piece of  
same length & about 4 inches in breadth and is  
covered on the other surface with leather -  
The splint thus constructed is split into pieces of  
nearly broad so that it may be applied round the  
limb - on the firm middle piece are attached 2  
holes for bandages to pass through.

The splint is applied on the under part of the leg  
the bandages then applied above & below the knee  
& finally over the whole of it.

to Mr Pluntre who after considering the case, advised the patient to sit every day on a table near to the wall & in this situation endeavour to touch the wall with her toe. — At first the motion was impeded by pain however the motion became evident, & eventually she recovered the entire use of her leg. — This is the only mode of treatment known to succeed, it will be found that the muscles soon accommodate themselves to their diminished length.

It is a doubtful point whether long union ever takes place in transverse fractures of the patella, if it were not for the want of bony union a stiff joint would eventually be the consequence of dislocations.

# Dislocations

when the Articulating

Motion at the joint is greatly impeded if not entirely lost. There is pain, alteration in the shape of the part if there be not much flesh over the part.

+ The principal difficulty arises in ordinary cases from the ~~combinations~~ involuntary motion of the voluntary muscles. and the ~~obstruction~~ of the ~~parts~~ of bone. in older cases - The difficulty arises also from new adhesions forming - from the cavity filling up and from the contraction of the capsular ligament around the neck of the bone.

Emetics in nauseating doses, the tobacco injector the injection of the fumes - the tobacco pipe, intoxication, opium. fatigue. All these may be true when ~~as~~ <sup>as</sup> a ~~del~~ <sup>del</sup> is contraindicated. The idea of bleeding as ~~del~~ <sup>as</sup> a ~~del~~ <sup>del</sup> originated with Doctor A. Monroe

Surface of a bone escapes from its natural situation, it is said to be luxated or dislocated. & the motion is entirely lost. —

If called at the time of the accident the reduction is easily accomplished. But if much time has elapsed two difficulties increase — the capsular ligament seldom affords any obstacle to the reduction, but sometimes this occurs. —

To produce relaxation in the muscular system, various remedies may be employed. V. S. ad deliquum Animu, low diet, purging &c. Great Yoreu is sometimes used on those occasions of much injury done — this is rendered unmerciful by the free use of the Lancet. —

By this means the whole muscular system is completely reduced. —

If however the prejudices of the past forbids this we must have recourse to

As important a direction as I shall give you is  
that you make the extention on the dislocated bone  
and counterextention ~~on~~ <sup>by</sup> the bone from which  
the bone is connected.

Never let the patient know that you are going  
to attempt the reduction, if you can help it.  
You thereby take the muscles as it were on ~~sudden~~  
and before they can act, the bone is reduced.

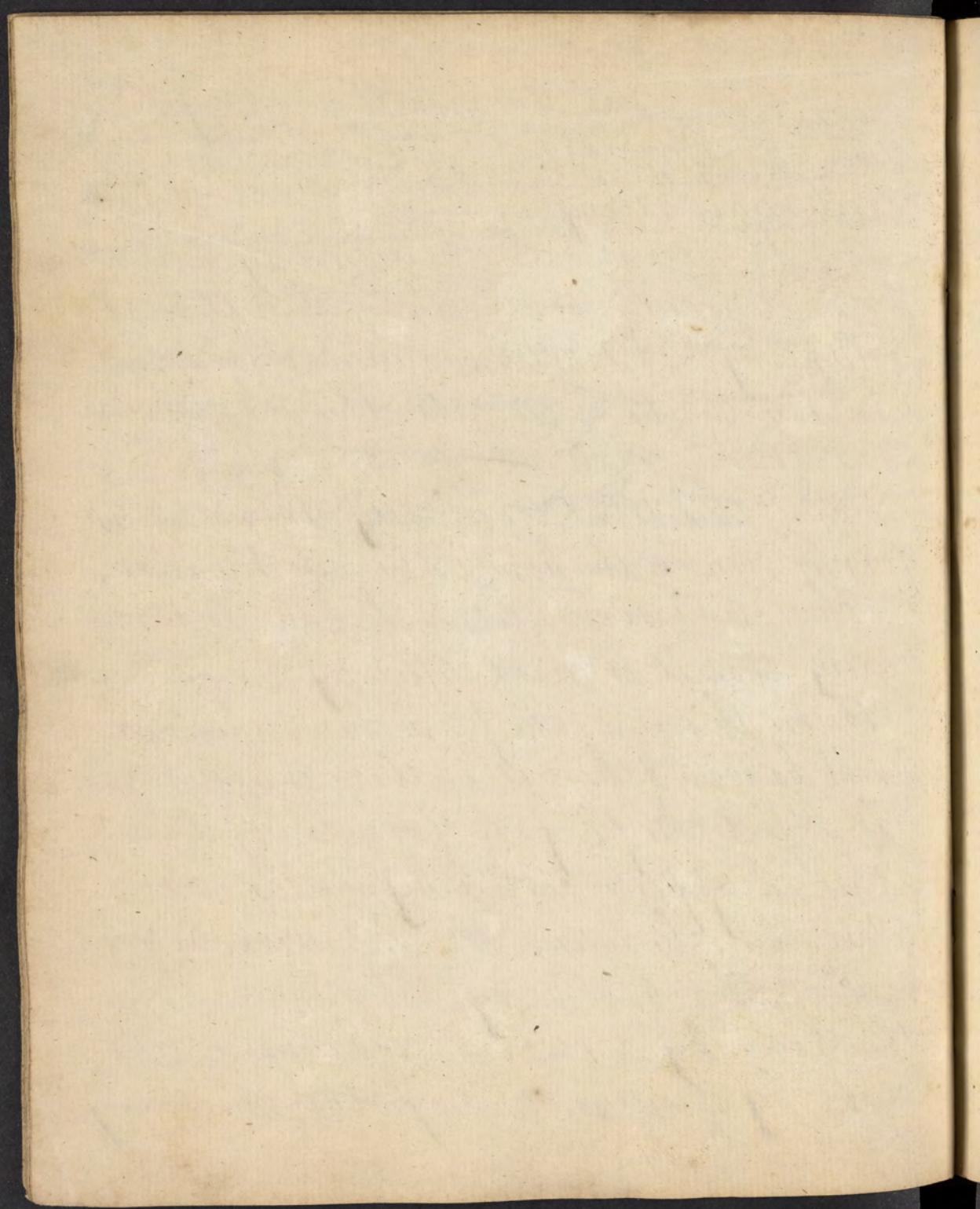
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other measures - intoxication will pro-  
duce the effect, fatiguing the muscles with  
continual attempts. —

In recent cases the difficulty arises  
from Muscular contraction, which is in-  
voluntary. But after continuing for some  
time say Weeks or Months, this muscular  
contraction ceases: —

By this time we usually find adhesions  
formed round the bone in its new situation.  
These adhesions retain the bone so com-  
pletely that it is with difficulty removed.

Before this can take place these adhesions  
must be torn & the rent in them is audible,  
To effect this purpose force is requisite &  
this is applied either by Pulleys or  
Assistants the latter Dr. P. prefers, as you  
can in this case vary the direction of  
the force by a wire, whereas if it is  
done by Pulleys or any other machinery



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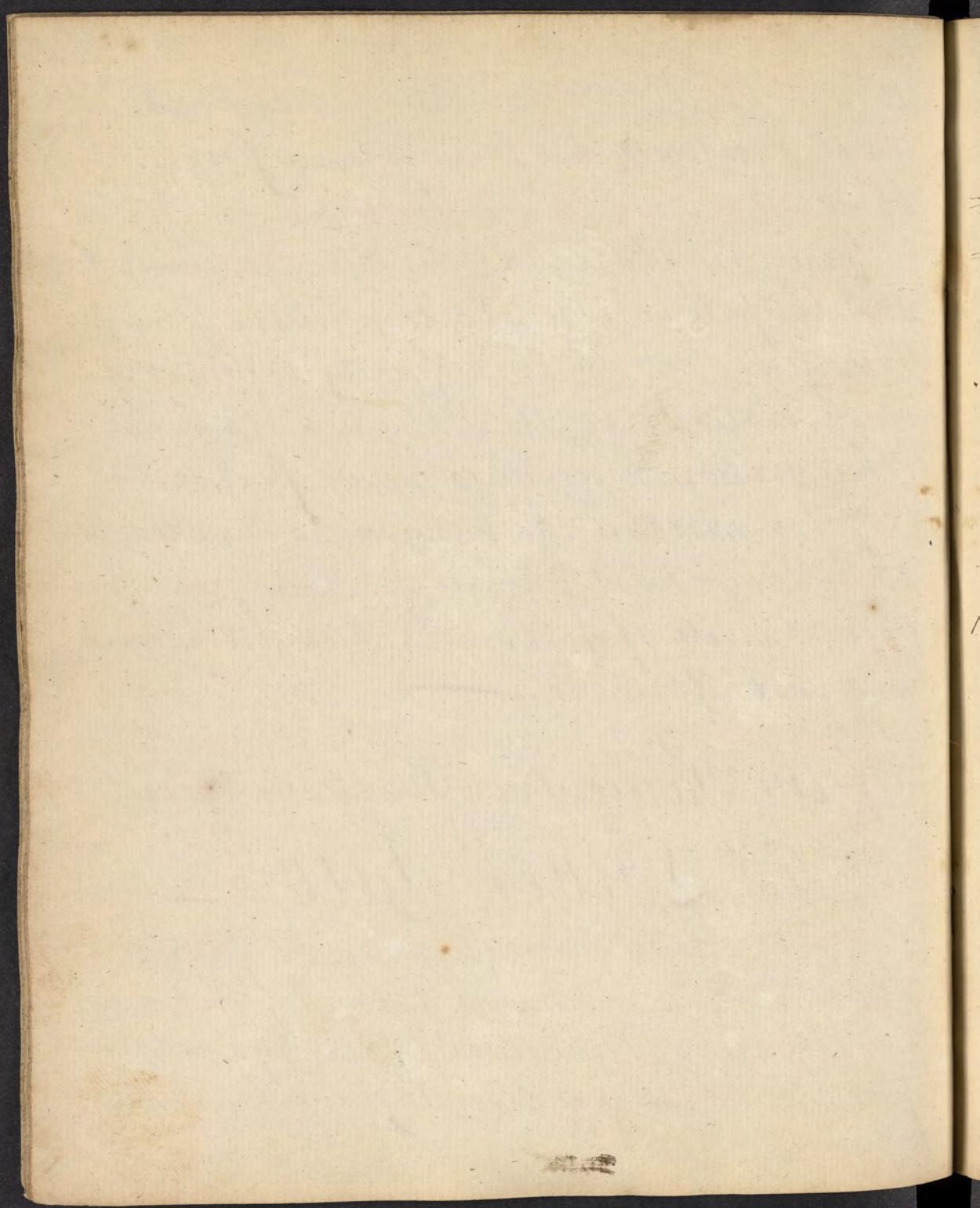
it will be liable to this inconvenience, that as it can only act from a fixed point, so it can act only in one direction. —

Sometimes the luxation is never reduced & tho' the patient is unable to move the limb for some time, yet the limb finally becomes capable of motion, by the formation of a joint. This motion however is never perfect. —

If for instance the humerus is luxated at the Elbow & not reduced, the new joint formed admits of motion backward & outward but not forward. —

## Of the Particular Luxations & first Of the Lower Jaw. —

In dislocations of this place, the direction is always forward, the condyles are situated at the root of the Zygomatic process & both are usually luxated, but



Sometimes only one.

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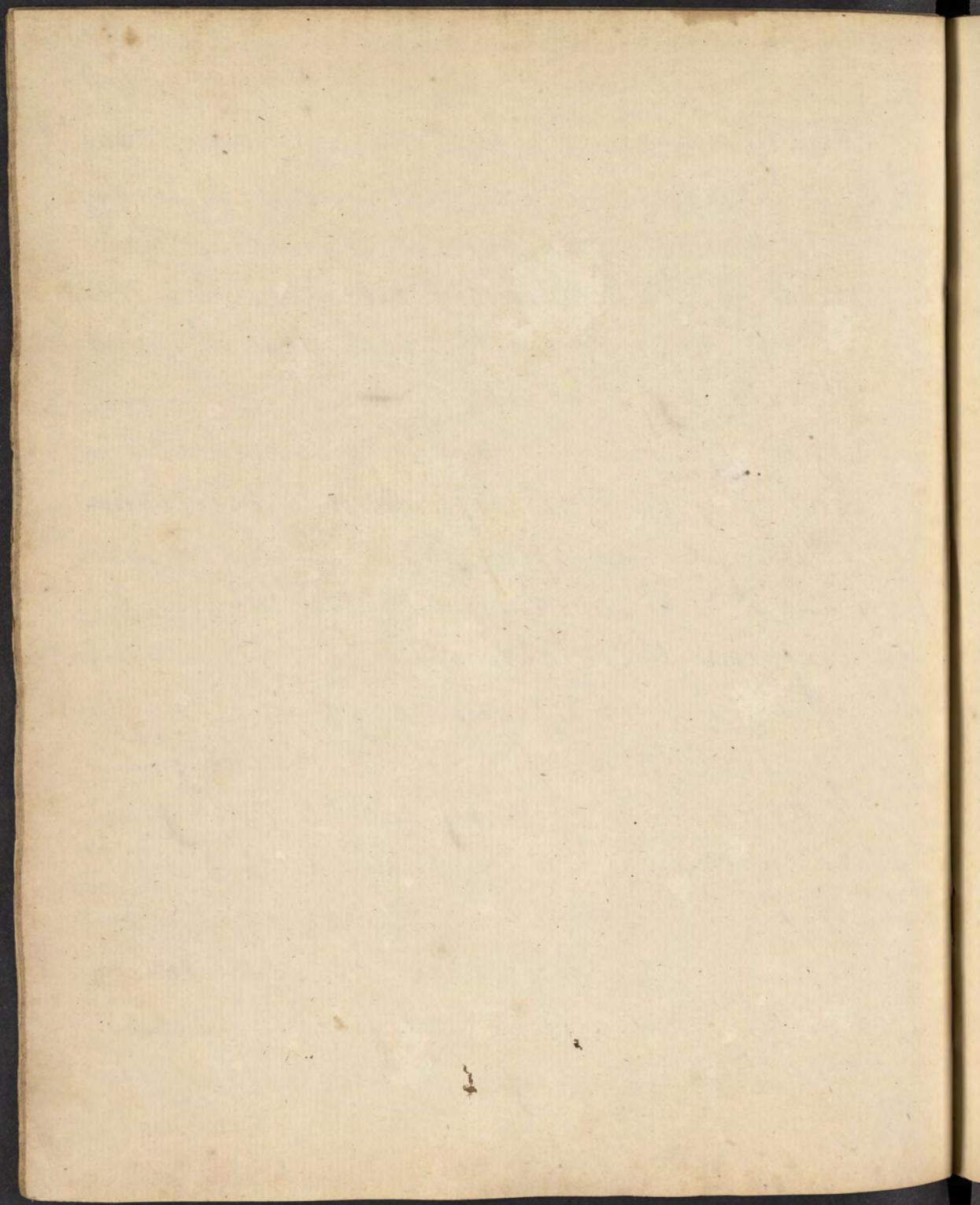
This accident usually occurs from yawning, the mouth is extended and it is impossible to close it, the patient cannot speak or swallow, & the saliva flows from his mouth.

Dr. P. was called to a case which was produced by ~~Colicing~~.

Besides the symptoms above enumerated, he could, by <sup>an</sup> careful expression behind the ear

Attempts are often made in this situation by those who are ignorant of the subject, to accomplish their reduction by a blow under the chin, but this serves only to increase pain & will never succeed, unless accidentally.

The reduction is very simple & easy, — place the thumbs on the Molar teeth & the fingers under the chin, the thumbs are to be defended with leather or folded linen, while the Molar teeth are pressed down the chin is raised up, by this means use

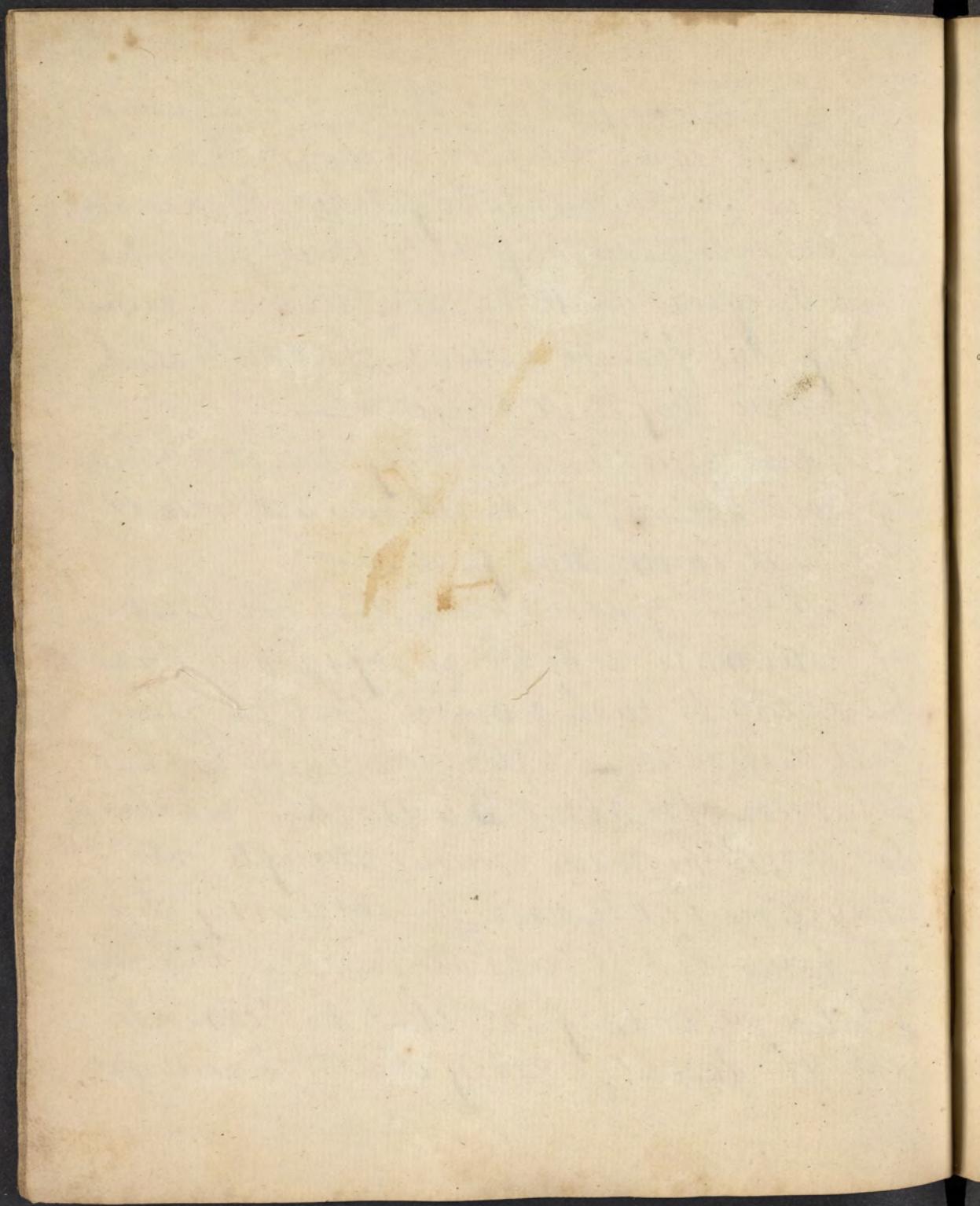


the bone of the Jaw as a lever & the thumbs  
as the fulcrum — As soon as the Lorecles begin  
to move the Chin is to be pushed backwards,  
the Lorecles soon slip into their place —

The Surgeon must be careful at this moment  
to slip his Fingers between the teeth & chin,  
otherwise they will be bitten —

If not called immediately much difficult-  
ty will occur, as the Muscles act so as to  
retain it in its new place —

A case of this kind was here related  
of a woman who for Dropsy had been  
salivated to such a degree that the Jaw  
was dislocated — After remaining in this  
situation for about 3 weeks she was brought  
to Dr. P. He made various attempts at  
reduction but in vain — Dr. Dorsey did  
the same but it was all in vain so debi-  
litated was the patient that he feared to  
use the lancet & carry it as far as might



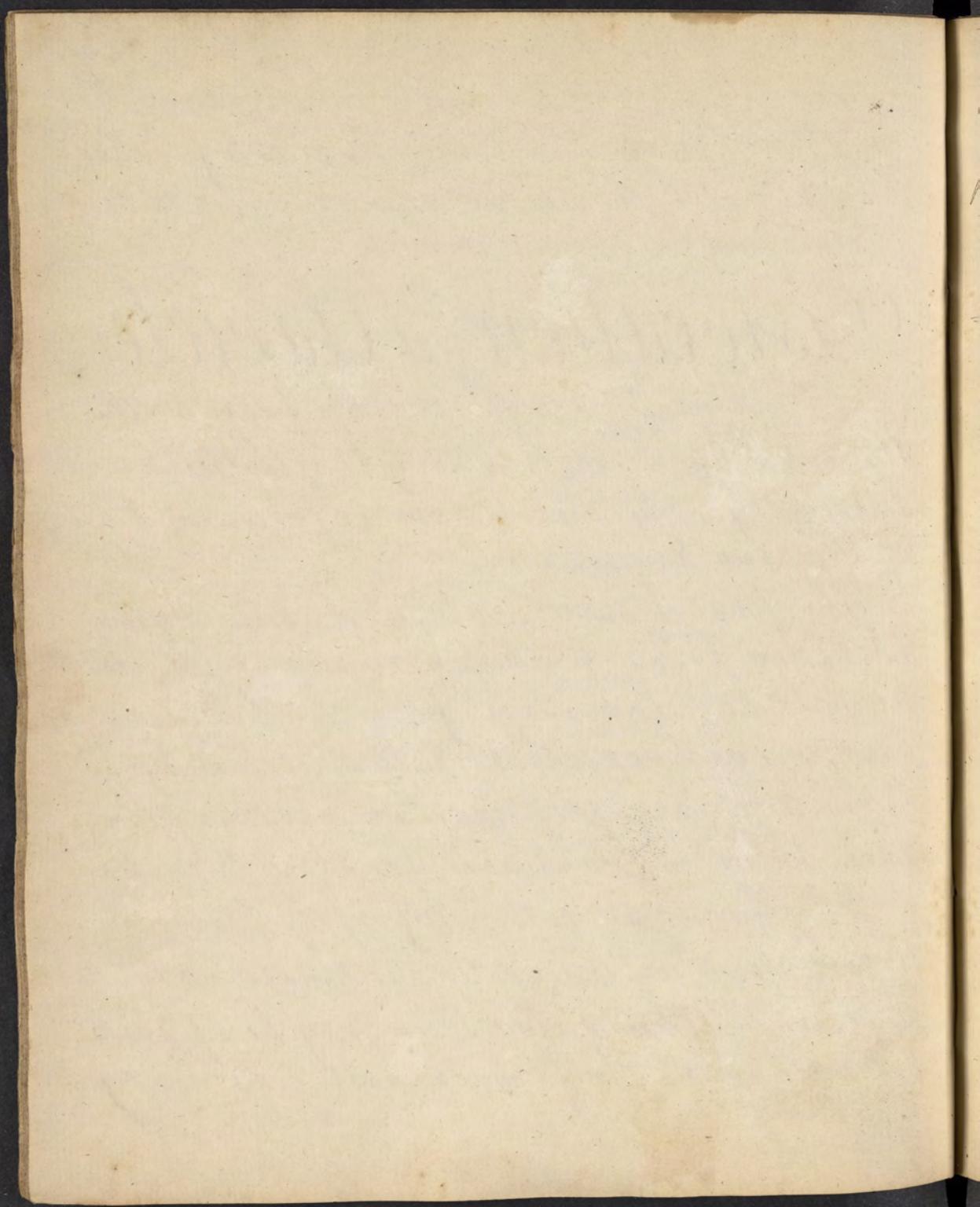
be necessary, the proposed intemperance, the Lucy recurred, no sooner was this produced than he with the utmost ease received the dislocation.

## Dislocation of the Clavicle

Rarely occurs, it takes place at the sternal & humoral extremity. At the sternal extremity, the dislocation is forwards & backwards & upwards.

The first is most usual, it is caused by the shoulder being pushed forwards with violence. In reducing it push the shoulder backwards & outwards, & then retained by the same dressings as if fracture had taken place, this should be continued for about 8 weeks.

The humeral extremity of the clavicle is not so often dislocated at the sternal extremity, this dislocation may be upwards & downwards, the former most commonly.



caused by falling on the shoulder & is easily  
detected by examining at the shoulder whence  
the integuments are very thin.

To reduce the luxation push the arm direct  
ly upwards — The dressings are the same as in  
case of fracture.

Much attention is necessary to keep the  
dressings exact, we should examine twice in the  
day; The difficulty arises from the weight  
of the arm having a tendency to displace  
the parts. — Even after all our attention, we  
sometimes fail in producing the effect we  
have in view. The apparatus is to be  
applied 3 or 4 months.

— Lect: 30<sup>th</sup> —

Dislocation of the <sup>3<sup>rd</sup></sup> Clav. —

Dislocations of this place  
occur oftener than those at any other

The dislocation forward is of two kinds.

- 1 above the coronoid process -
- 2 below that process.

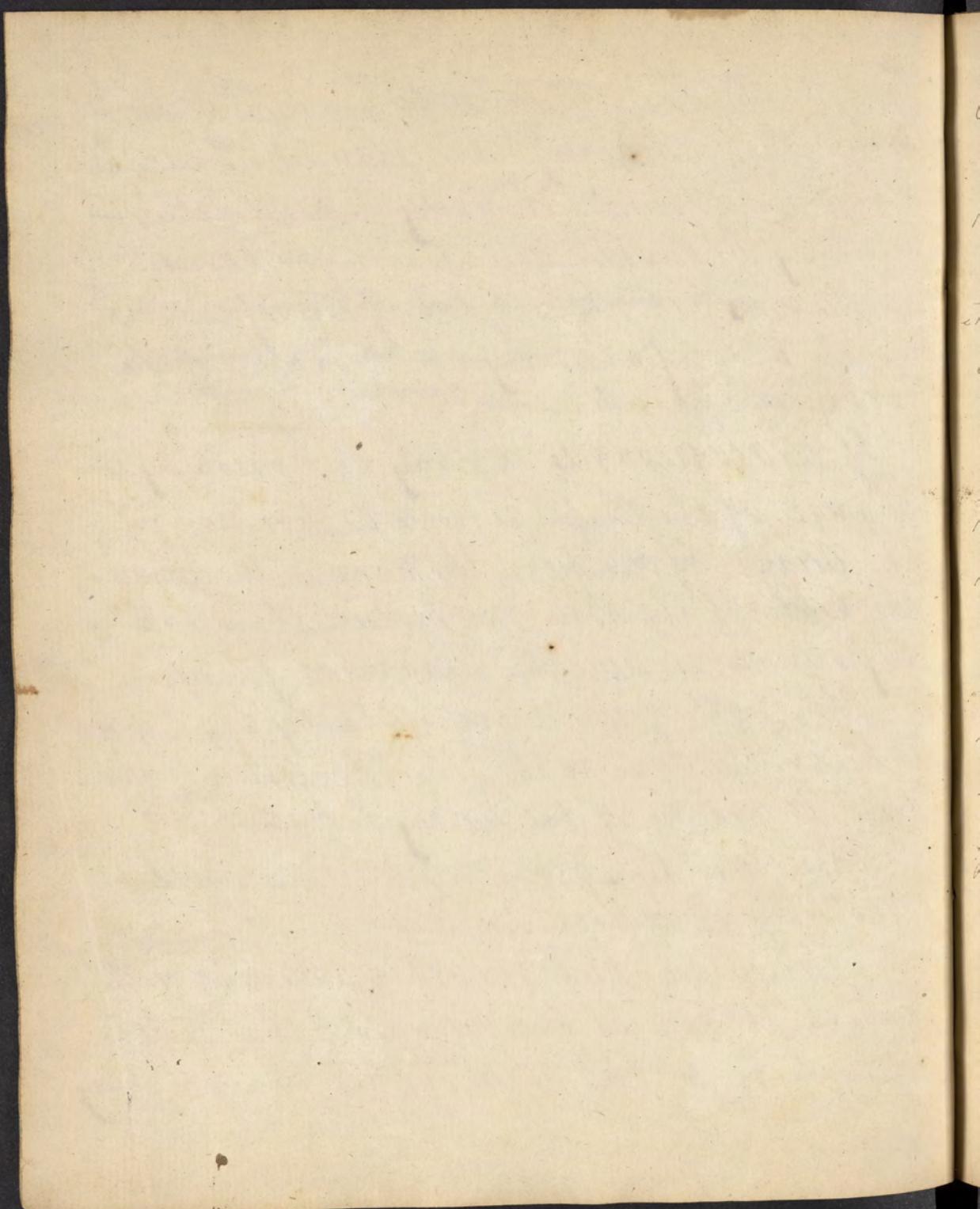
place of the bone, in fact it has been asserted upon good authority that they exceed all the other luxations of the body taken together— It may be luxated downwards forward & backwards, it cannot take place upwards unless accompanied by the fracture of the acromion process.

If downwards it may be known by the change of the shape as well as position of the arm, If we place the hand in the axilla the head of the bone can be felt, there is a depression under the acromion process

The patient finds it impossible by any exertion to bring the arm to the side & the power of motion is nearly if not totally lost.

By these symptoms the existence of the accident is discovered.

There are but one other accident with which it can be confounded & that is, the fracture of the neck of this bone, it may



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be distinguished by observing, that in the case of fracture, we distinguish by feeling the sharp ends of the fragments instead of the round head of the bone, & also in fractures there is no depression under the acromion. To distinguish between these accidents is of much importance. —

If the dislocation be recent it is easily to be reduced — Dr. P. has often accomplished this without the assistance of any one

The hand of the left hand is to be placed on the acromion process, so as to make counter extension, this is more readily done that I with the other we hold the shoulder just above the elbow & make extension, this is more readily done than could have been imagined, for the patients thinking that great force is requisite & not supposing that we will make any attempt at the reduction without

R

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assistant makes no resistance & "the  
Muscle are taken as it were by Surprise"  
It so happens however that the Surgeon is  
several times called until many efforts have  
been made to reduce it by those that  
happen to be near.

The general cause of failure in these  
cases is, that the assistants usually make  
counterextension by clasping the patient  
around the body, in this case little force  
is applied to the luxated joint, it is in  
fact all lost; force so applied might be  
so great as to tear off the Scapula and  
Clavicle together with the arm without  
accomplishing the reduction of the bone.

It appears therefore a most important  
direction, that the counterextending force  
should be applied at the Acromion process.

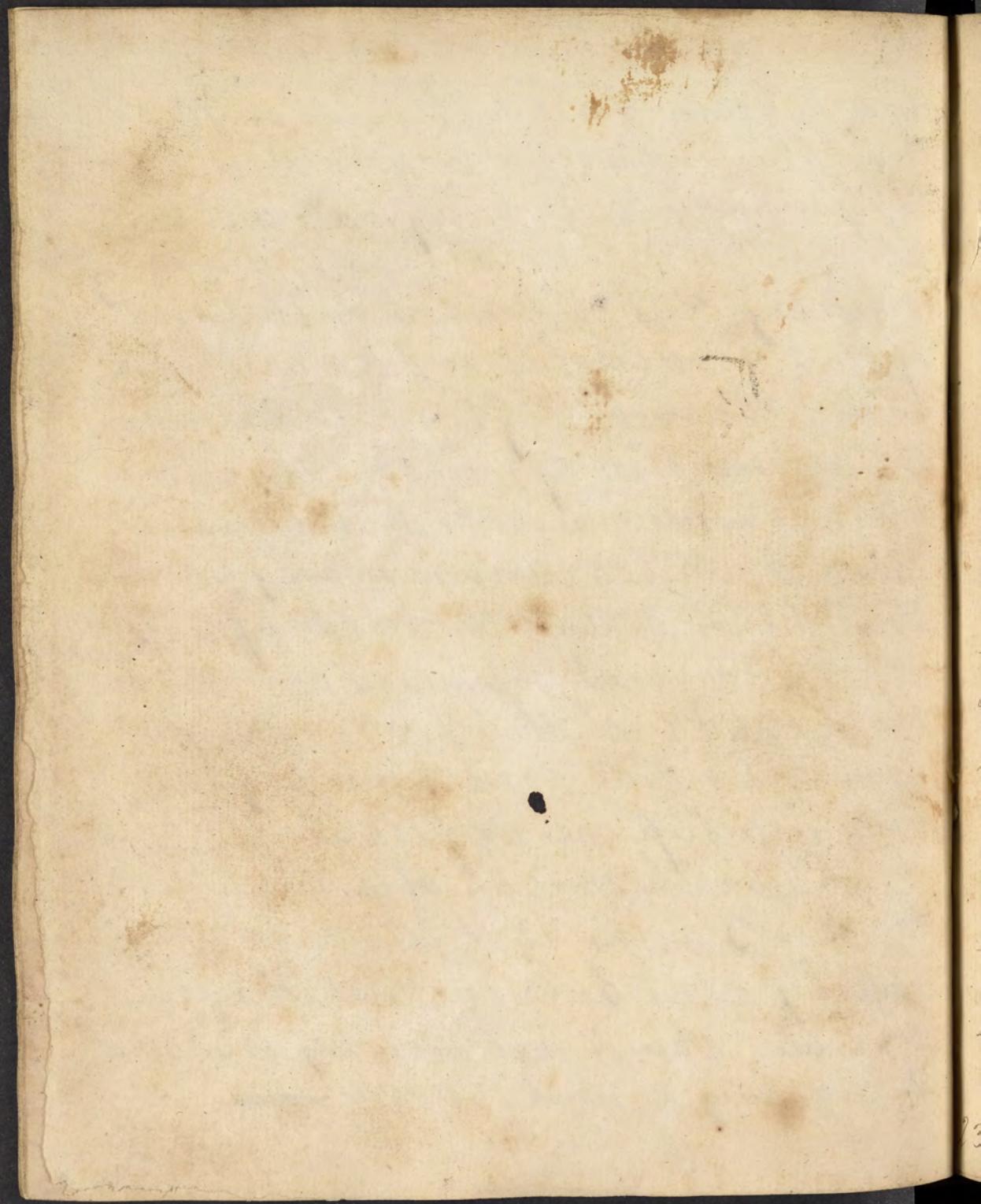
If we make use of assistants the num-  
bers for extension & counterextension

should move the forearm back and forward on the  
elbow.

must be equal, for if we have two on the one side & four on the other the force of the two supernumeraries will be expended uselessly. Above or your assistants is all that is usually necessary to flex the forearm on the arm. Wrap a chancery cloth or band around the arm, observing to place buckskin under it previous to its application, this is to be given to assistants who make extension others make counterextension by placing their hands against the anterior process.

The Surgeon now places one chancery on the axilla & with the other holds the patient's arm to his side most commonly the bone will slip into its place.

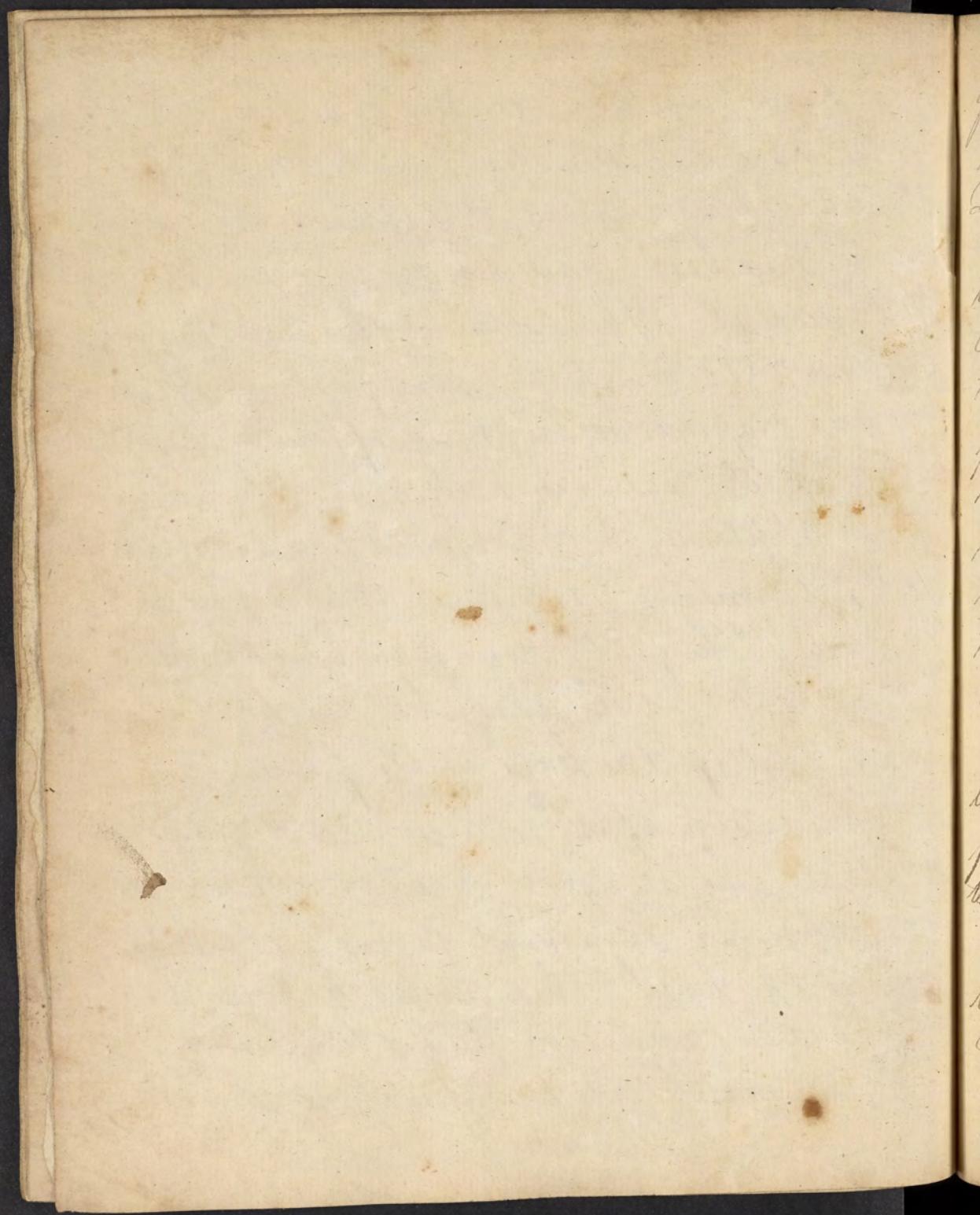
After the existence of the accident for 2 or 3 weeks it is rare indeed as a rule by some Surgeons that it is irreducible, this is not strictly true, but the difficulty is much increased.



A case was here related of a man whose arm had been luxated for some time previous to Dr. P. seeing him, at different times great force had been made use of in endeavouring to reduce it. There was at this time much inflam<sup>n</sup>. & excoriation taken place — Two weeks elapsed before the symptoms subsided. The Pat<sup>t</sup>. was very unwilling to have much force applied, he however at length consented; immense force was applied but all in vain, the Pat<sup>t</sup>. was now blest ad. deliq. animi and Dr. P. was able without assistants to slip the bone in its place.

The action of the Muscles is not the only obstacle the Surgeon has to contend with, the Capsular ligament forms adhesions round the bone & these must be torn before the reduction takes place —

To accomplish this purpose much

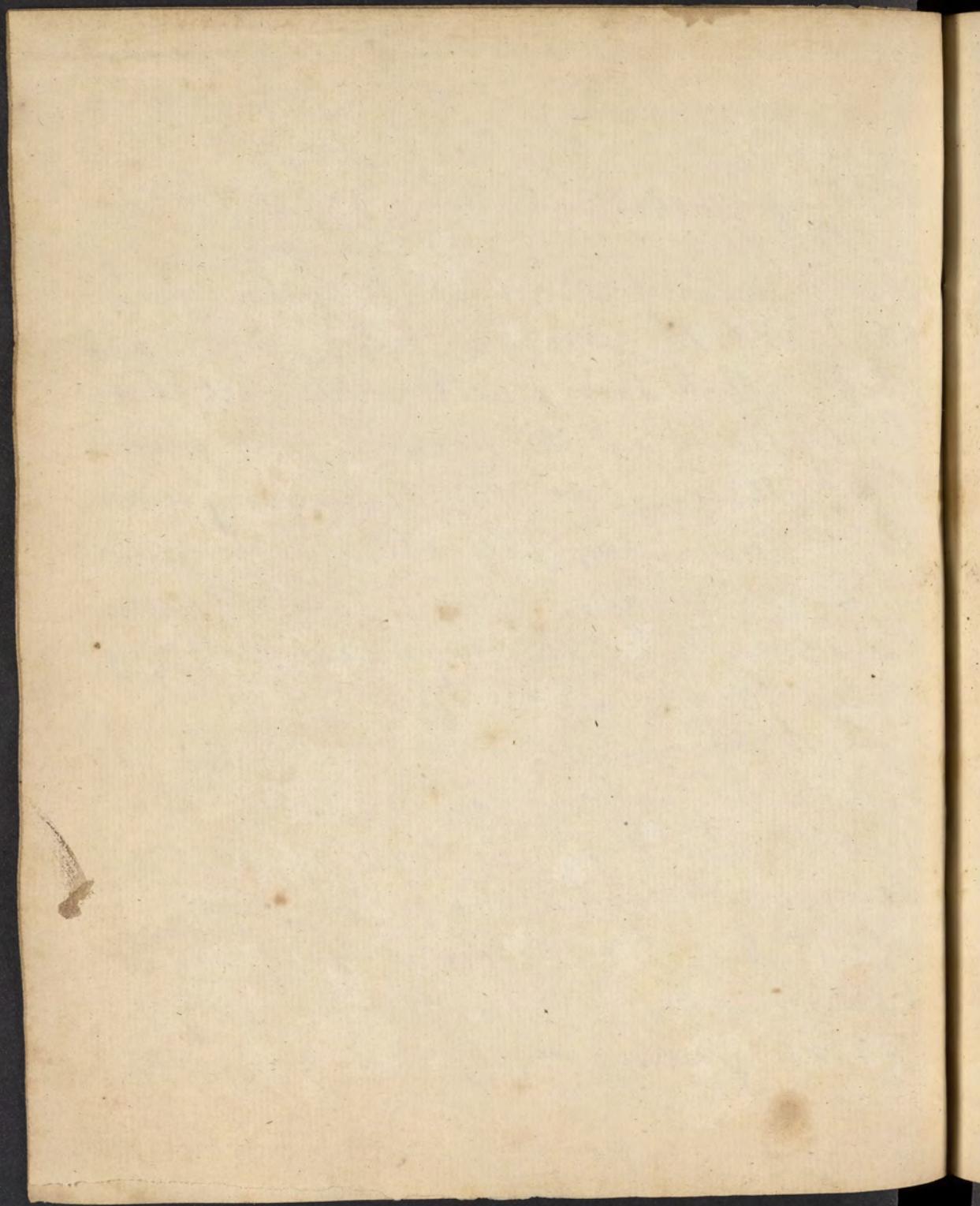


force is required. In these cases there is very little resistance from the Musely, I therefore Dr. P. does not think V.S. of any importance.

The force is applied as above directed, except that instead of the hands of assistants being applied to the Acromion procep, a quilt quilted with Buck Skin is to be applied at this part & fixed to a staple in the floor or given to assistants. It may be necessary to make use of Pillis sec, As soon as the reduction is accomplished, a pad is to be applied under the Arm, & a bandage to prevent its being again luxated.

Dr. P. never failed in reducing the bone to its proper place but twice, One patient refused to submit to the application of the requisite force & the other was irreducable.

When the luxation is forward the bone rests between the glenoid cavity & the Coracoid procep - the reduction of this



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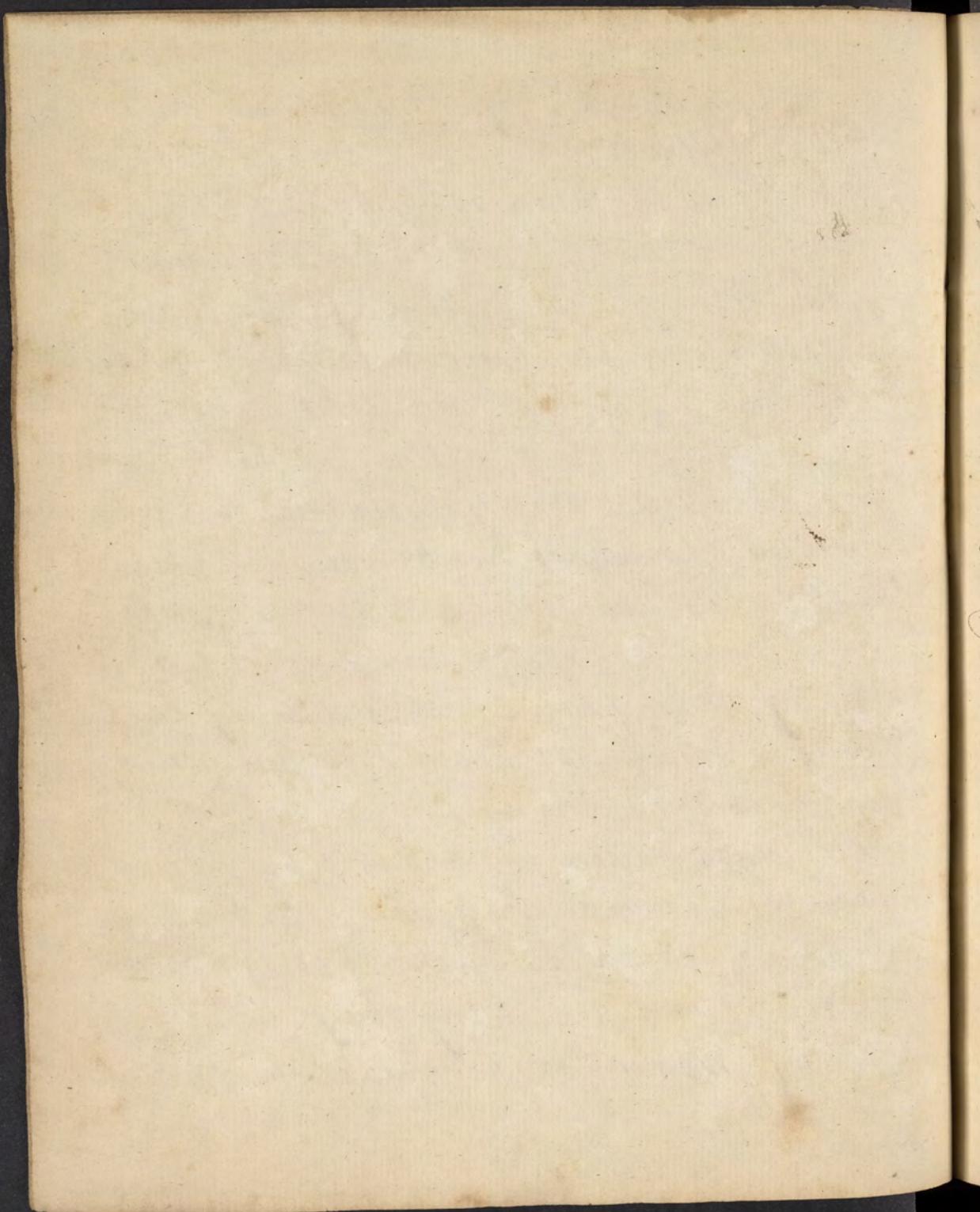
Noe would think easy, But noe mistake, it  
is very difficult.

Sometimes the Head of the bone will pass  
over the Coronoide process & rest between it  
and the Clavicle, the difficulty of effecting  
the reduction in this Case is great, much  
Force was used but little effect was pro-  
duced, At length the direction of the force  
being changed, Counterextension was made  
upwards & forwards & extension downwards  
& backwards the desired effect was produced.

There is another luxation which se-  
cundarily takes place & that is directly back  
wards Dr. P. has never seen but one  
Case of this kind.

He was called in, about a half hour  
after the accident happened, the Head of  
the bone was on the back of the scapula  
its reduction was very easy.

Many modes for the reduction of fracture,



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have been recommended and adopted,  
this above described is the least objectionable

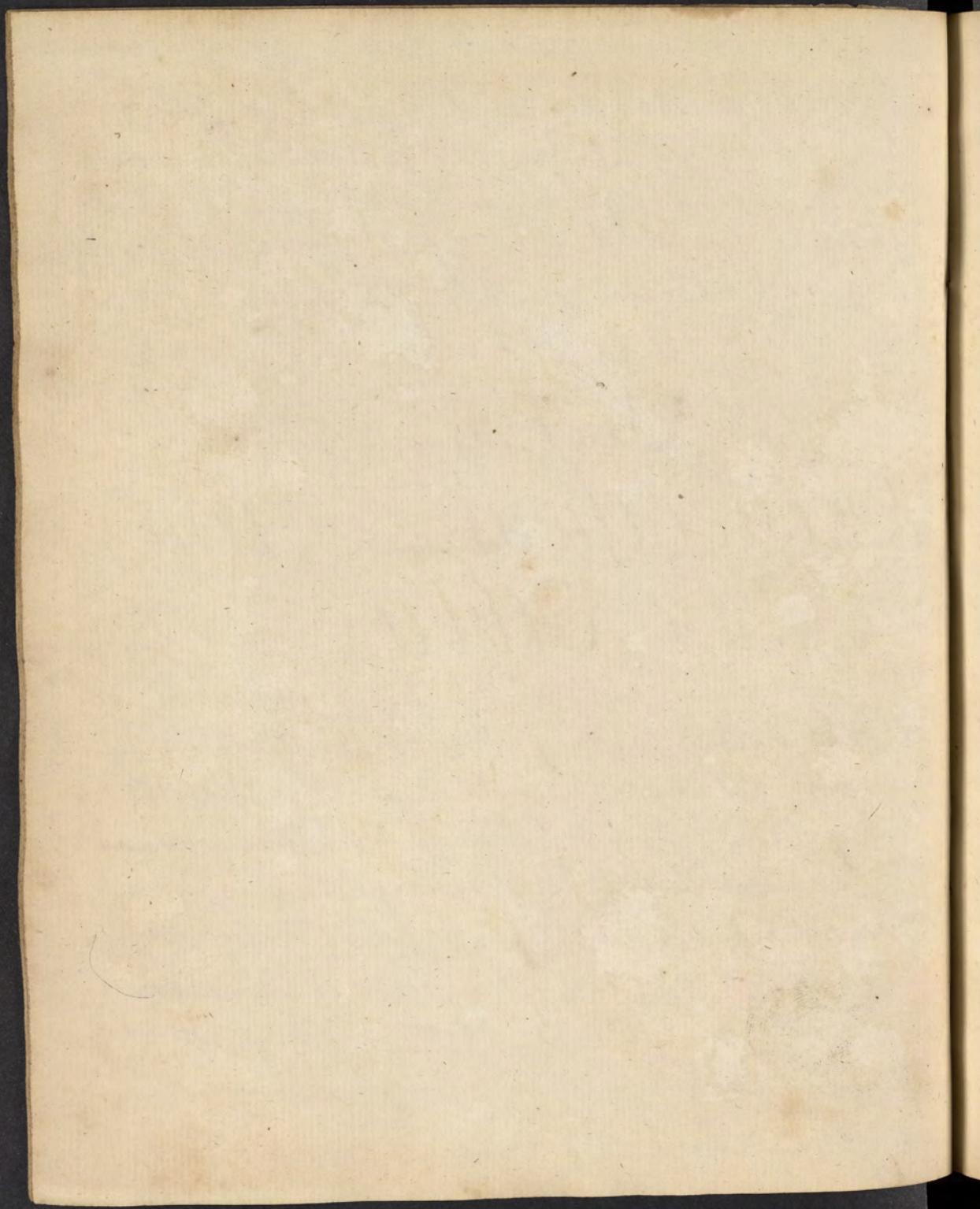
In fact it appears that the only thing  
to be kept in mind upon all occasions is,  
that counterextension is to be made from  
the Coronoid process. —

Sect: 31<sup>st</sup>

## Dislocations of the ARM At the ELBOW

Dislocations of the Forearm at the  
Elbow joint rarely occurs, but we may  
sometimes be called to it — An accident  
may take place upwards & backwards —

In this case the Coronoid process will be  
found in the cavity of the Os humeri formed  
for the olecranon, the arm is shortened  
the forearm is bent on the arm so  
as to form an obtuse angle. —



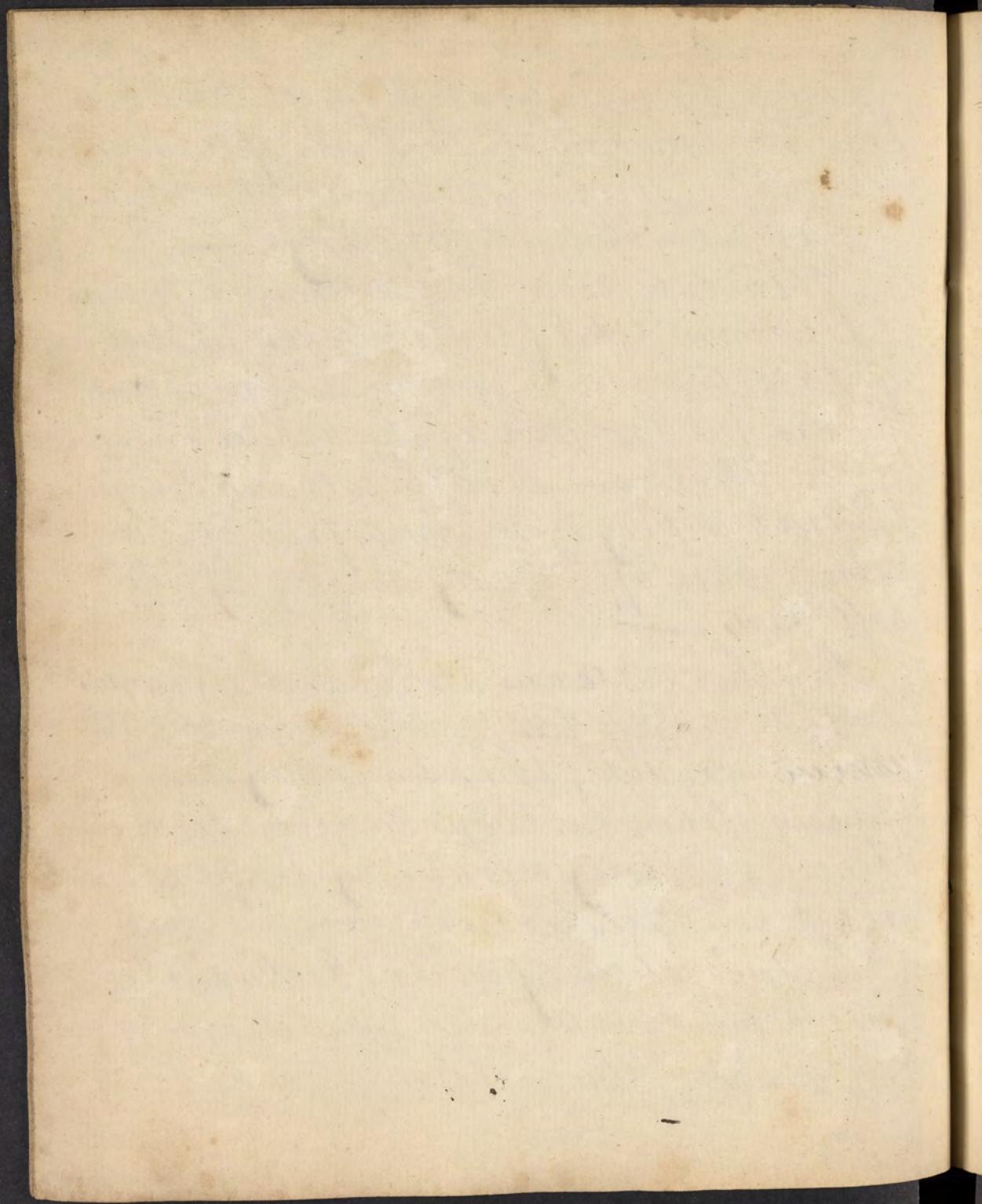
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There is an unnatural projection of the  
bones & we can feel the hook like appearance  
of the olecranon, the radius is loose & the hand  
is moved with much difficulty.

There can never be a dislocation forward;  
it sometimes takes place sideways it is easily  
discovered as the joint is disfigured and  
we can feel the head of the radius & hook  
of the olecranon over the external condyle;  
the joint is very loose and appears as if it  
were broken off & merely hanging by the  
soft parts.

In other instances the luxation is inward  
in this case we feel the olecranon over the  
inner condyle; this joint is very loose &  
appears These luxations however seldom  
occur & are easily reduced by simple exten-  
sion & counterextension.

The dislocation upwards & backwards is  
most common - There is some danger of  
confounding this accident with the fracture

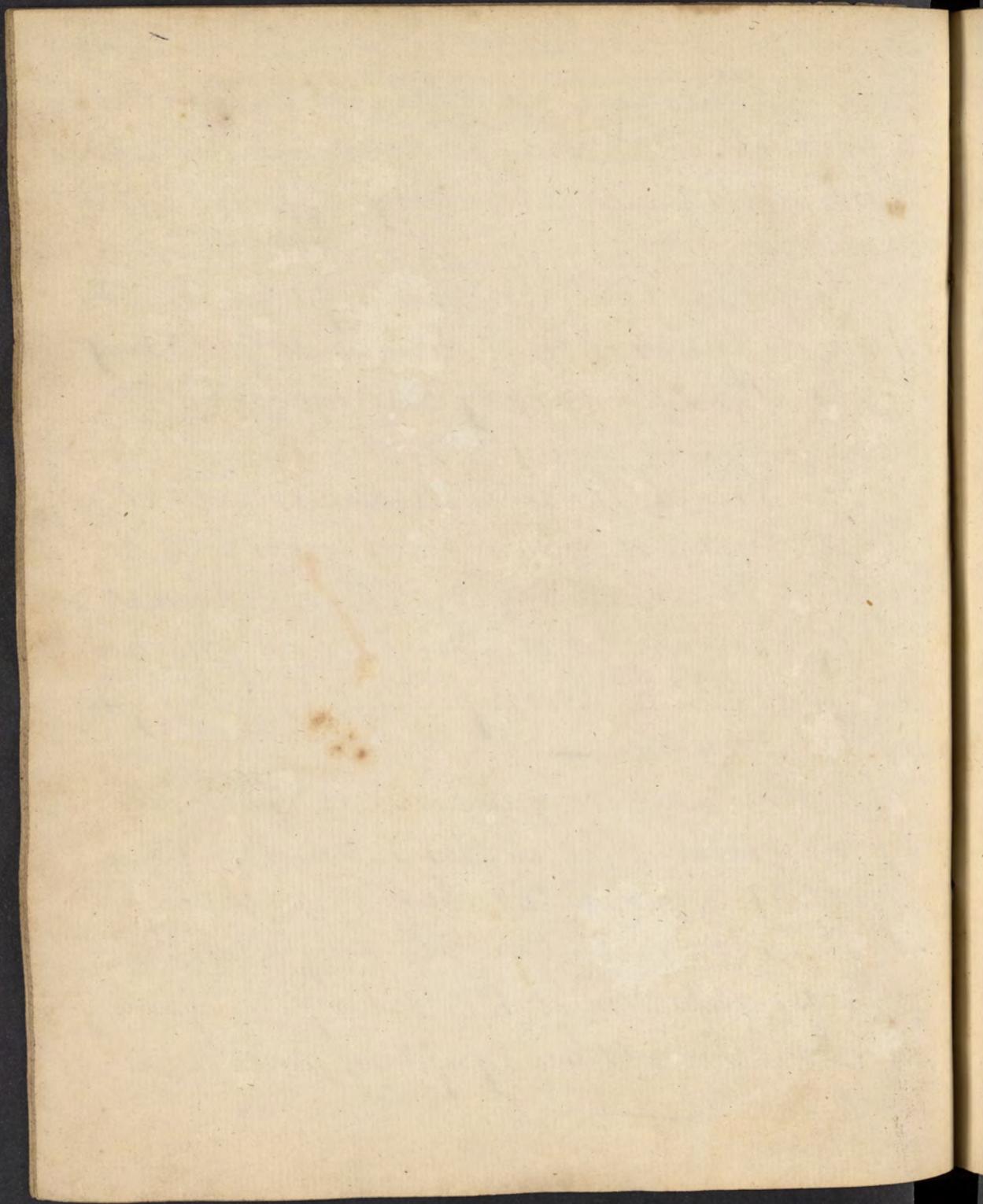


area of the lower end of the Os humore & it  
is of much importance to distinguish between  
them as the treatment is very different in the  
two cases. —

If for instance we were to place a luxated  
limb in splints & let it remain so for 3 or 4  
weeks it might be very difficult to effect  
Reduction. —

The French Surgeons declare that if the  
luxation is not reduced in 16 weeks it is im-  
possible to accomplish it. This is incorrect  
Dr P. has reduced it after 6 weeks. But was  
not even able to accomplish it after the lapse  
of this period. —

It is to be distinguished from Fractures  
by observing that in this latter case (i.e.  
Fracture) we can feel the fragments or move  
the pieces on each other, & is easily reduced;  
But the displacement soon takes place again.  
Now neither of these symptoms exist in case  
of luxation. —



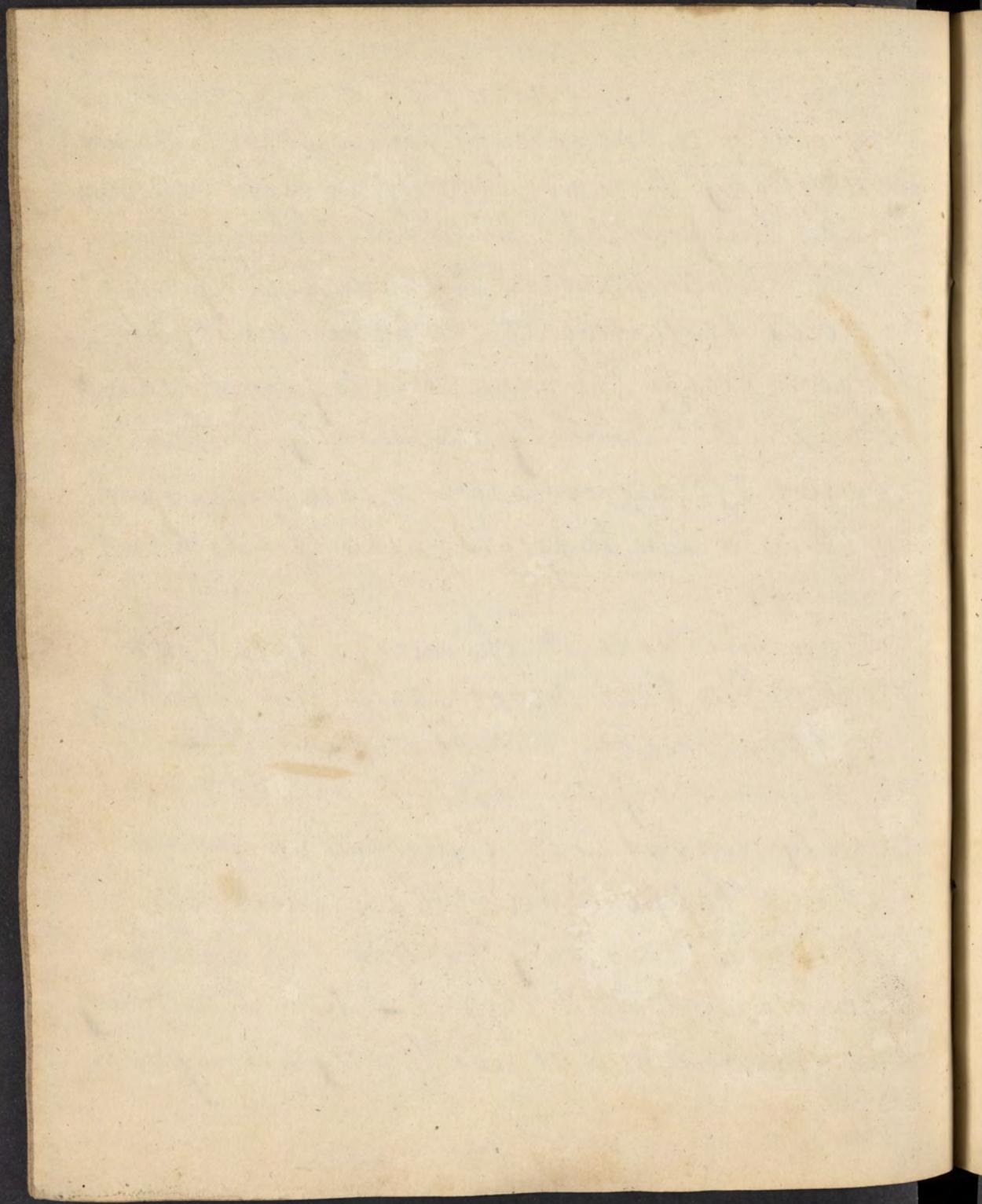
If the Accident be recent its reduction is very easily to be accomplished — Some extension is necessary to remove the effect of the Muscles; for this purpose not much strength is requisite.

The Counterextension is made high upon the Humerus Extension at the Hand & wrist, the Surgeon Clasps the Arm so as to place his thumbs about the Os humeri & pull directly backwards. Extension & Counterextension is then made & with his thumbs the Surgeon pushes the Os hum. forward. —

When not reduced the joint is stiff for a great while & can never again can be flexed the same motion will be required. —

If it is a complete luxation on one side, it is easily reduced as the ligaments are much torn

A case happened to Dr. P. in which the dislocation was only partial & the ligaments of course but little injured — here the difficulty was immense but it was finally accomplished.



After the reduction of a dislocation we shd.  
make use of Slings &c — and if inflammation  
ensue the Antiphlogistic plan is to be followed  
if necessary as it sometimes is, we may use  
the Ab-gular Splint. —

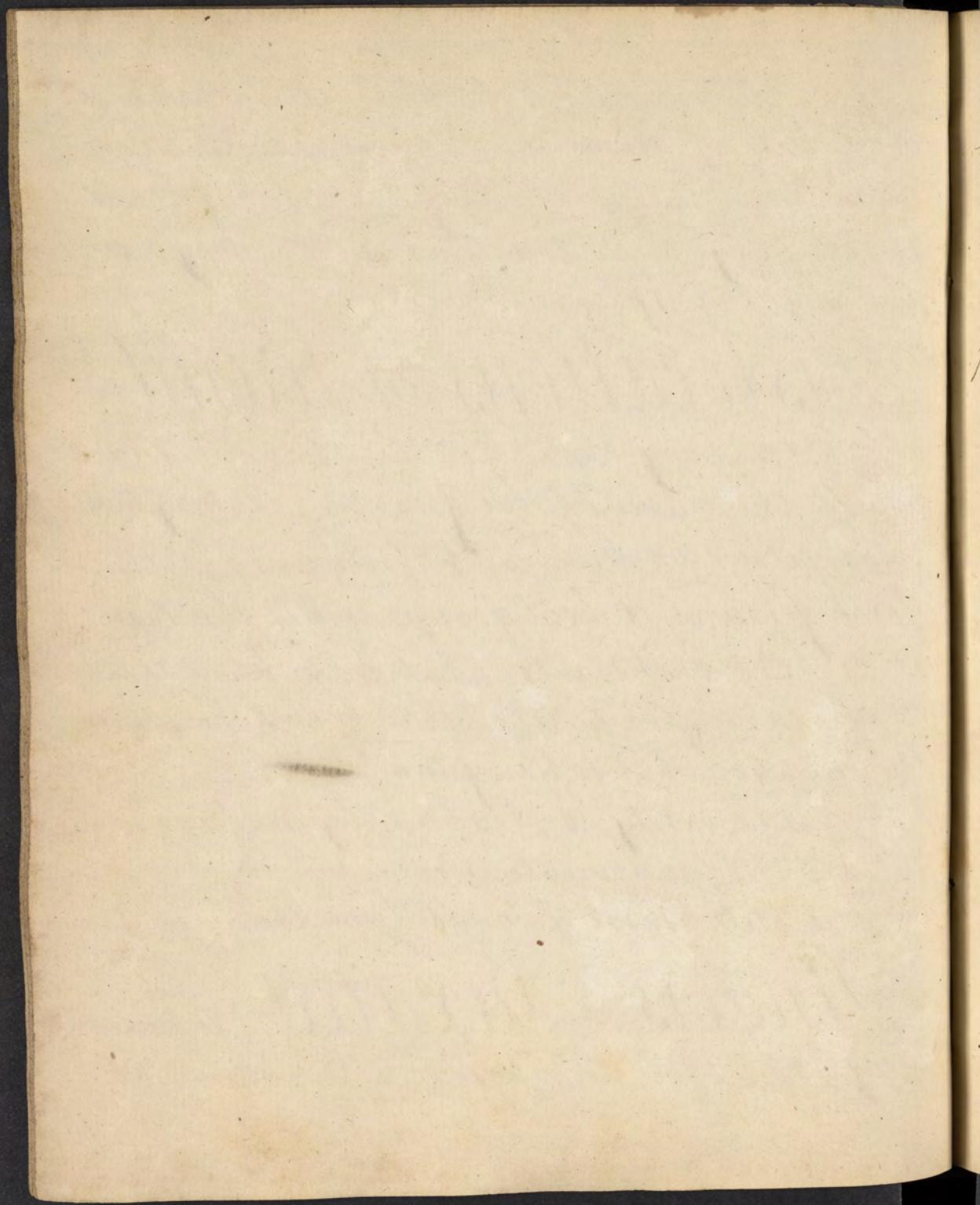
## Dislocations of the Hand

Are very rare, Dr P — has never seen  
one in the course of his practice, it may take  
place either backwards or forwards, in the  
first place it is bent forwards & in the last  
it is bent backwards, that is the hand is al-  
ways in opposite direction to that in which  
the luxation has taken place. —

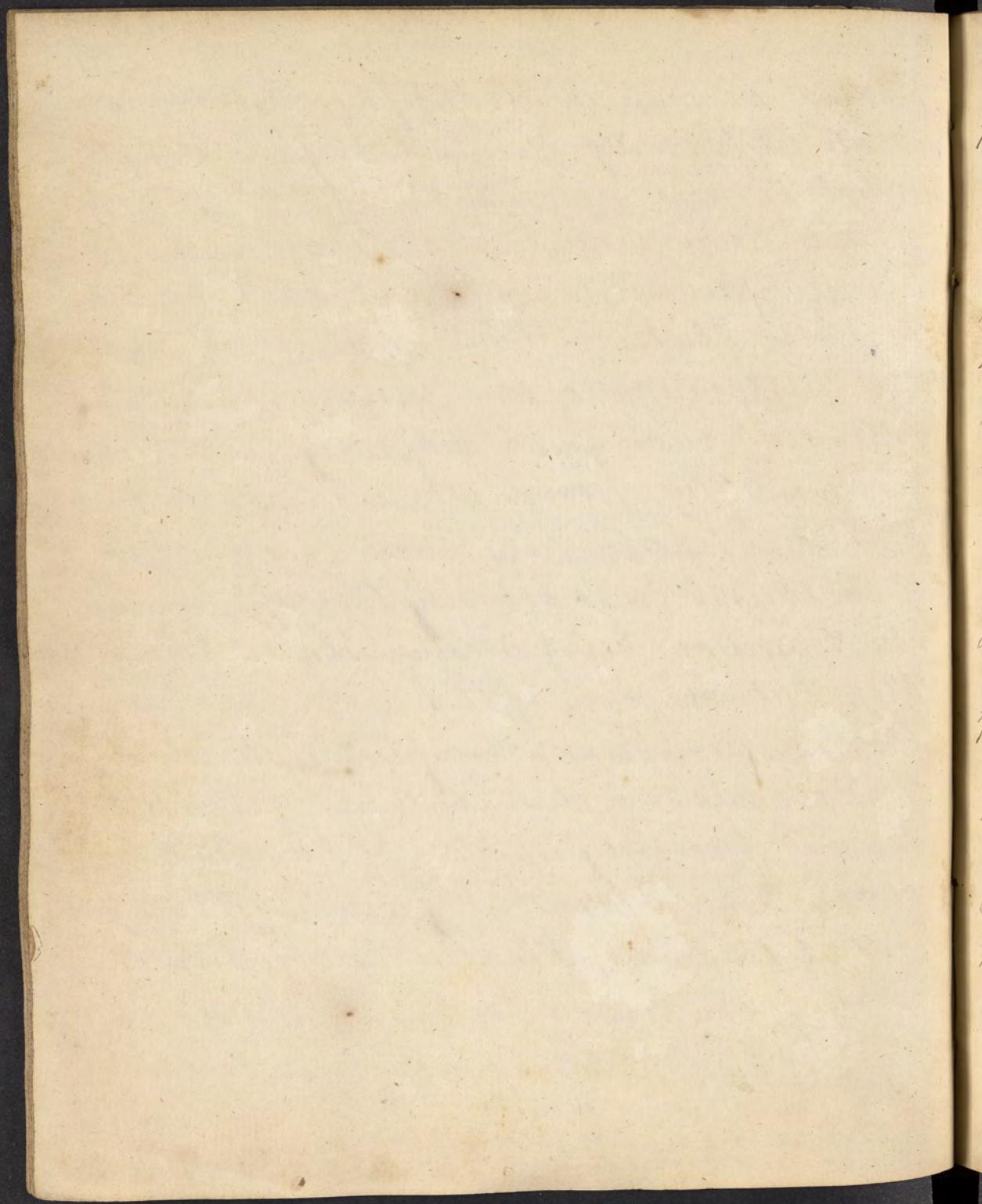
It would easily be reduced by making  
extension & counterextension. —

It is still more rare to find the

of  
Fingers luxated when  
they are, it is always backwards — It



Would be natural to suppose that considerable deformity would take place but it is not so great as might be supposed. Difficulties have sometimes occurred in distinguishing it. One symptom is always present, the finger is perfectly stiff. <sup>The reduction is easy, but</sup> the Dislocation of the Thumb has been attended with great difficulty in the reduction. Mr. Grey recovers a case in which such violent extension was made that the End of the thumb was actually torn off, without the reduction being accomplished. I have seen but one case of this kind - in this the reduction was accomplished, while I was examining it - in what manner I cannot precisely say. - If I had a case of this kind I would try bending the thumb but at all events, I can see no objection to cutting the lateral ligament as suggested by Mr. Bell. No inconvenience could



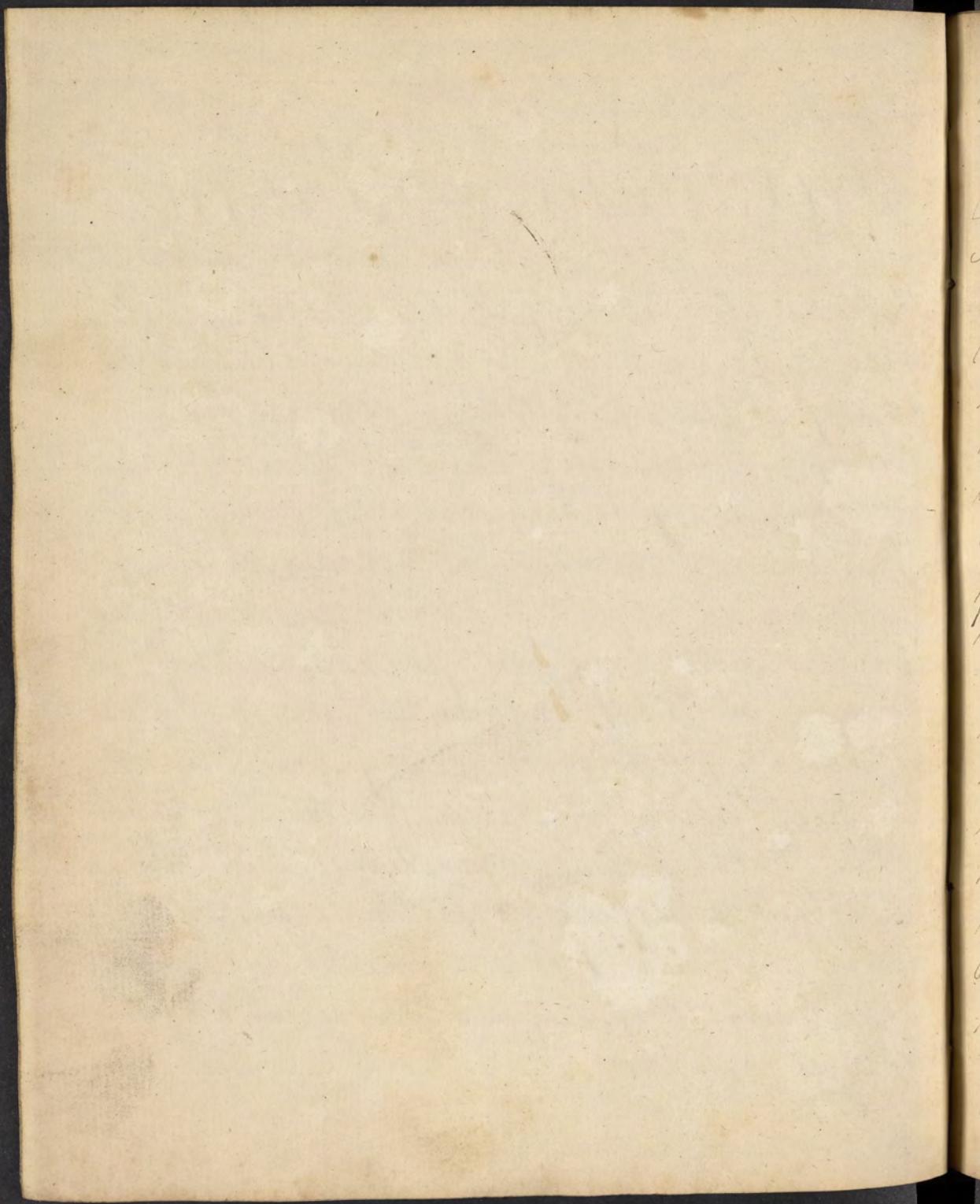
possibly arise from it

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## Luxations of the Thigh

The old Surgeons considered that it was almost impossible that the thigh should be luxated, as the acetabulum is so deep & the articulating connections so strong — This idea has been shown to be erroneous by subsequent experience & altho' fractures of the neck sometimes occur, yet judging from what I have seen luxations are the most frequent, perhaps in the proportion of 3 to 1 — these are not so frequent as has been imagined many fractures of the neck being mistaken for luxation —

The thigh bone is sometimes luxated Backwards & upwards in the bottom of the ilium here the toes are turned inwards sometimes it is luxated downwards & forwards into the here the

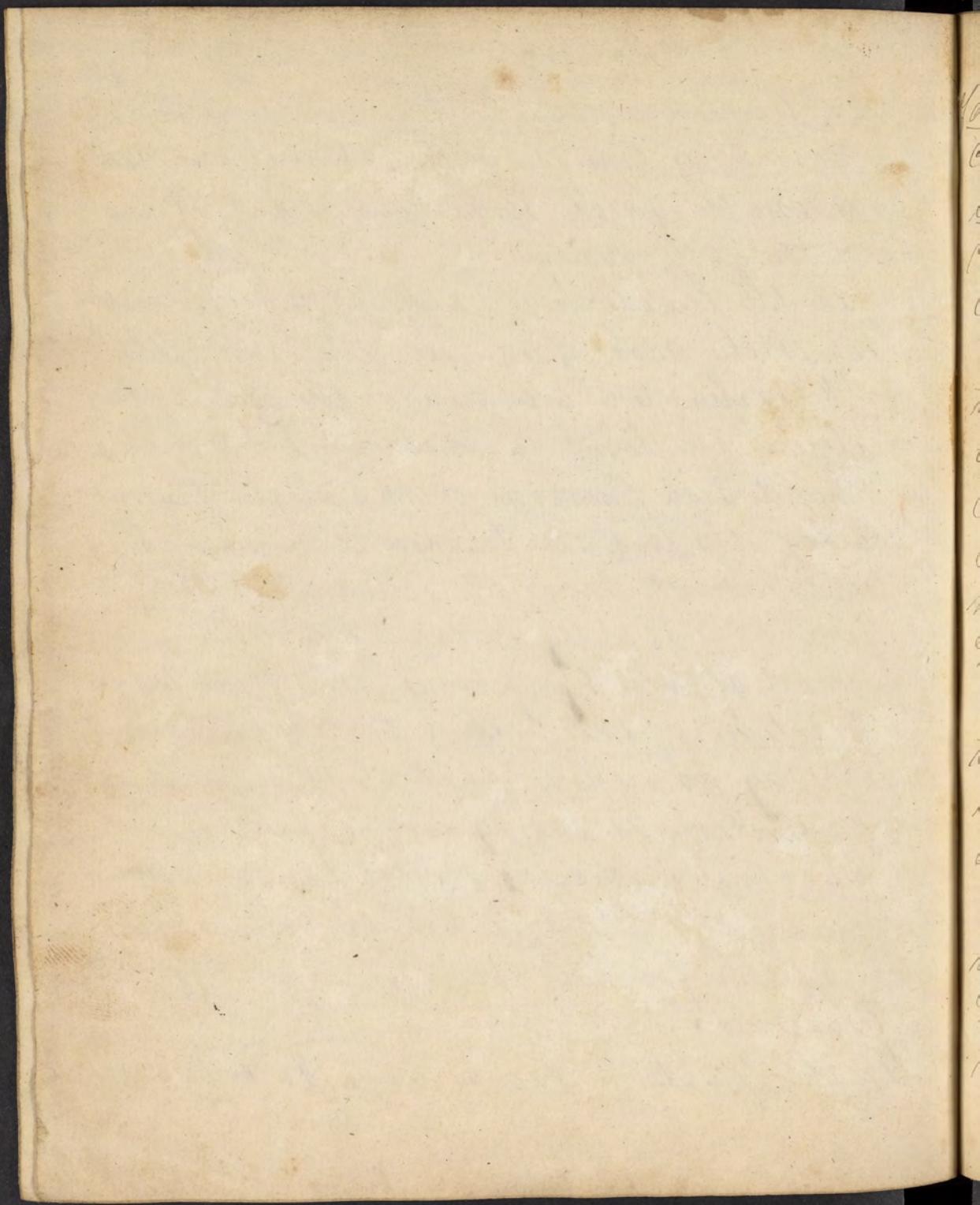


Toes are turned outwards - sometimes it is turned forward into the grain & sometimes backwards into the great Ischiatic notch ; of this I have seen one case.

When the luxation is backwards & sideways which is the most frequent, the head of the bone & trochanter are near the spine of the ilium, the limb is shortened 2 or 3 inches the knee drawn inwards with a slight flexion of the leg, the toes also turned inwards - the patient cannot move it - although the surgeon can slightly rotate & flex it.

In most of these symptoms, it differs from the fracture of the neck ; to which however may be added, that in these fractures the reduction is easily accomplished, but the shortening occurs when the extension is removed, which is not the case in luxation & in the former case also evulsion can be perceived.

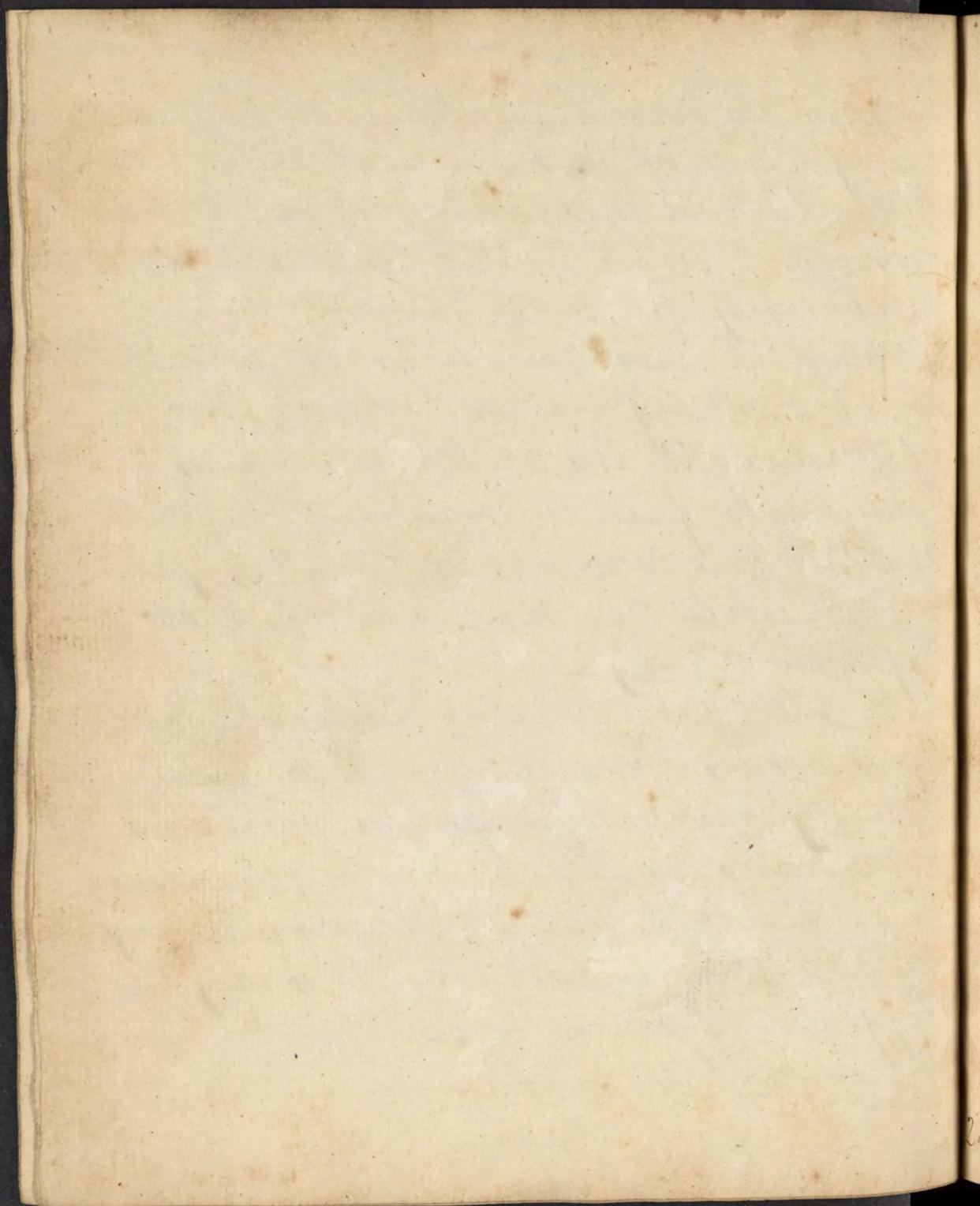
In the luxations downwards & also in that



forward the limb is lengthened in the former  
Case upwards of an Inch, in the latter but  
little, the foot is turned outwards & the knee  
removed from its fellow - besides the head  
can be easily felt in the groin.

When backwards you can feel the head of  
the bone no crepitus can be heard as in case  
of fracture the toes are turned inwards &  
considerable pain is produced - The French  
consider this as occurring secondarily, I  
have however seen one case in which it  
happened directly -

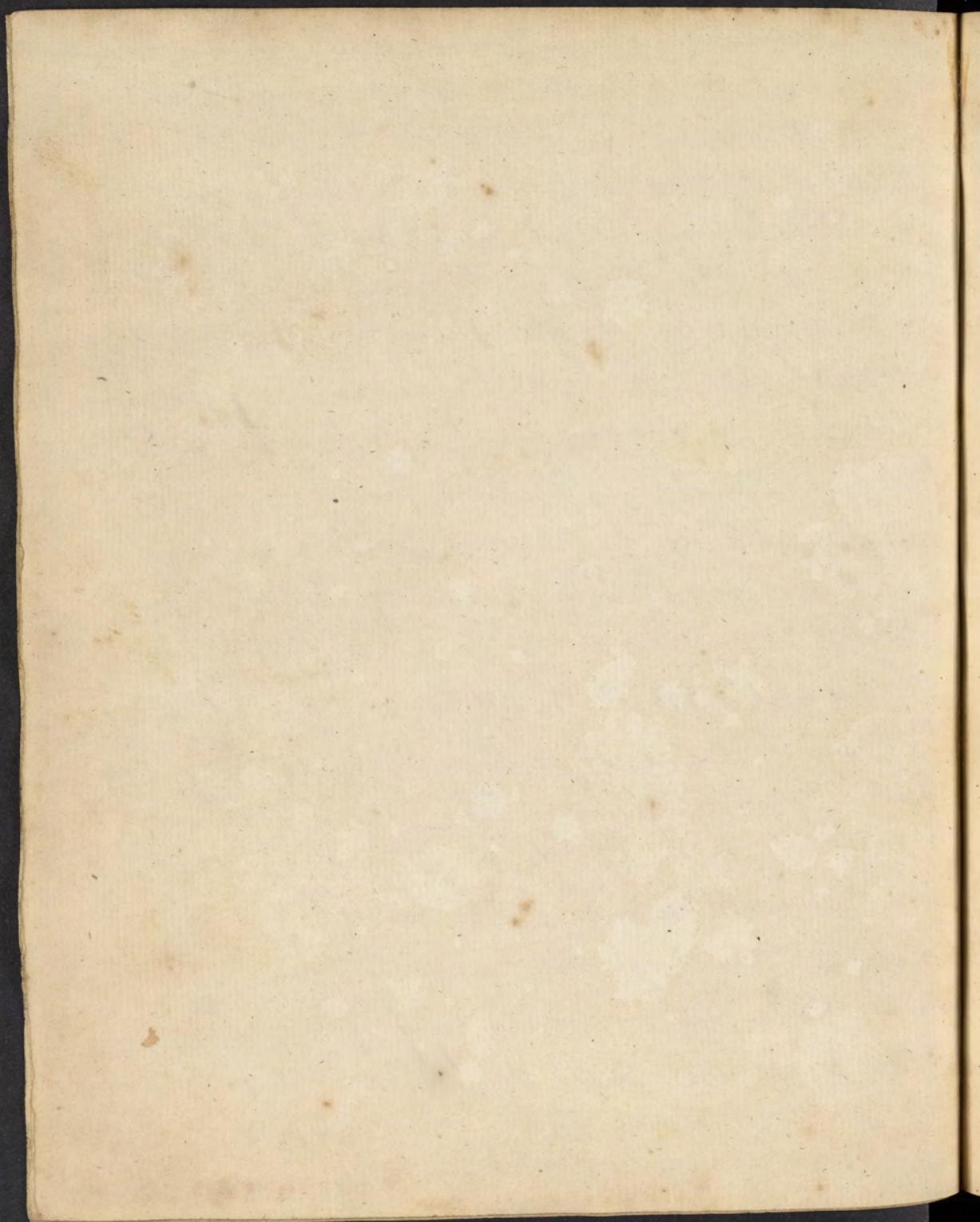
In Morbus Coccygicus dislocation some  
times occurs from tumour in the acetabulum  
usually backwards & upwards, sometimes  
downwards - This should be remembered  
as it would be unexp & dangerous to attempt  
the reduction in such cases, it is only when  
happening from accidents that we are  
to reduce luxations. -



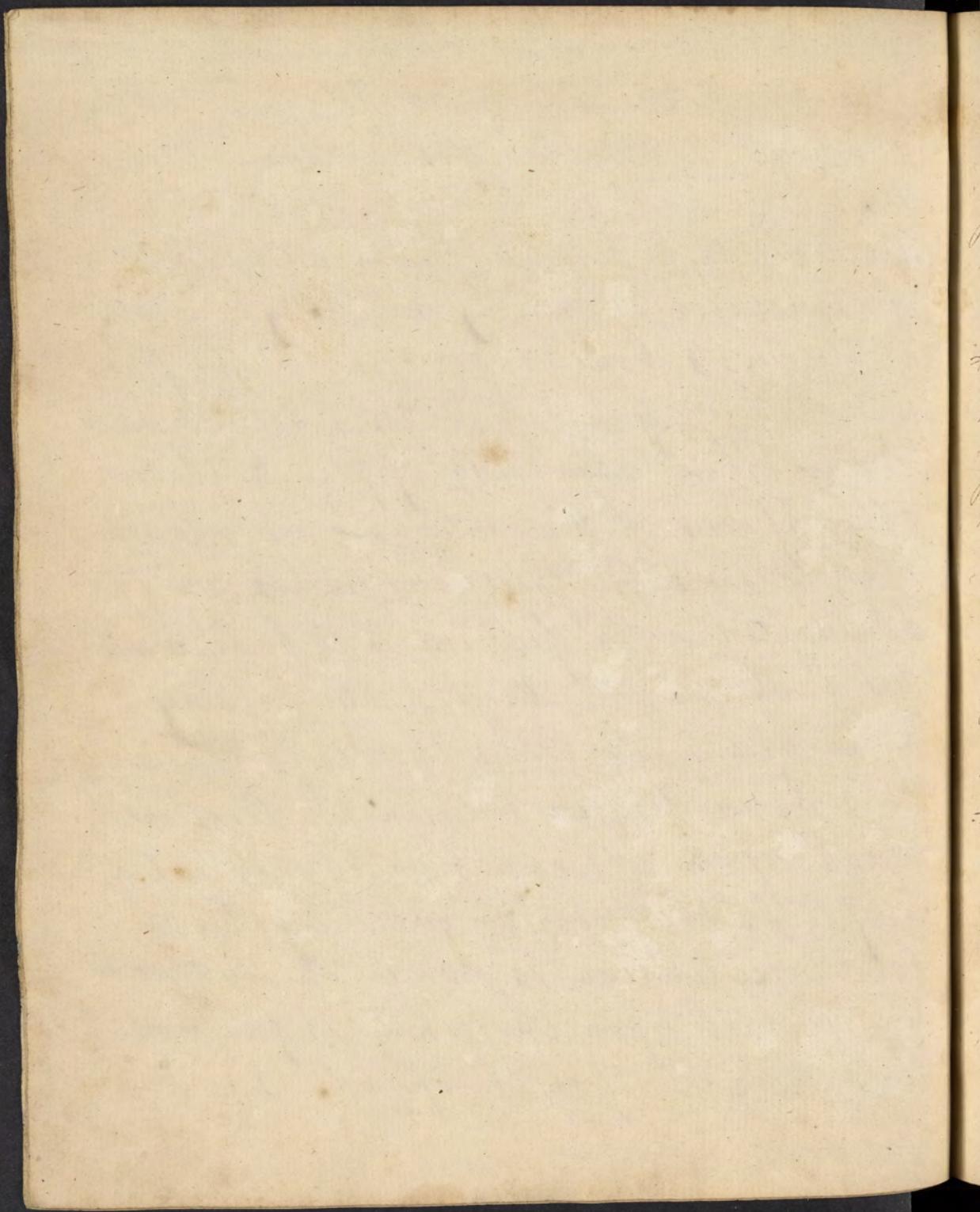
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A second state of the joint may & has been  
mistaken for Læsion - & that is mere con-  
fusion of this Article. - If the patient stands  
on his sound limb & of course the pelvis  
falls on the injured side, hence the limb  
has appeared lengthened as if elevated down-  
ward - I have seen surgeons very much  
perplexed in such a case, but the difficulty  
will vanish - if you remember in your  
examinations to have the Pelvis Straight -  
as then you can accurately determine  
whether one limb is lengthened. —

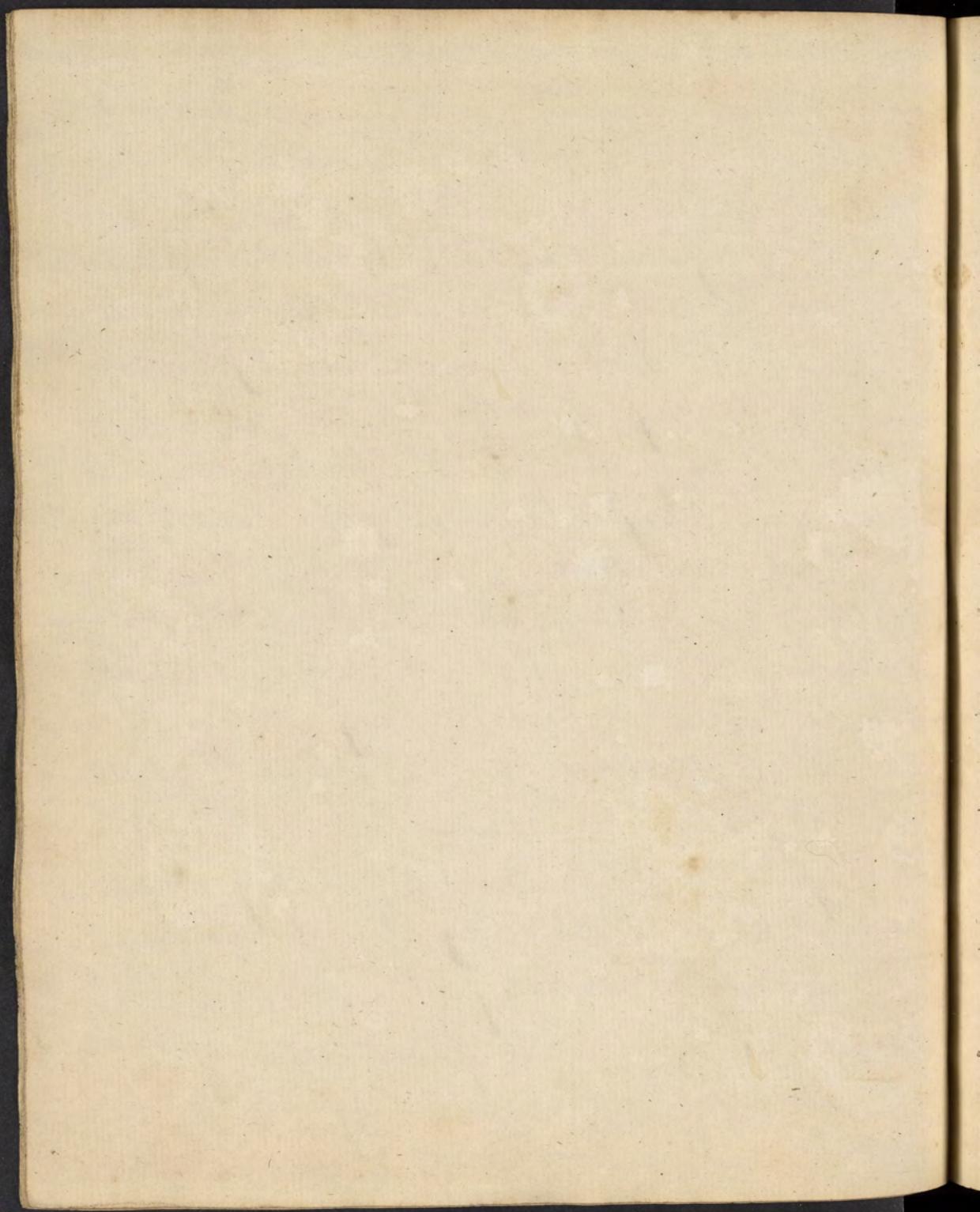
The Method of Reduction in all these  
several cases of dislocation is very simi-  
lar - In all of them, two objects are to be  
kept in view, the first is to draw the bone  
to the Acetabulum & the second is to raise  
it over the high margin of that cavity.  
Now these indications apply to each of  
the different kind of Dislocations, when



upward extension must be made to bring the head of the bone downwards. & then it is to be raised on the edge when the dislocation is into the foramen magnum the extension is equally necessary to draw it from its bed & to get clear of the part opposing its progress to its natural situation. — The same thing applies to the two other species of dislocation. — Now to effect these objects the following means are to be adopted — The patient is to be laid on his back in a mattress, table, or any hard bed — the Pelvis then to be fixed by a band passed between the Scrotum & thigh of the affected side & fastened to a staple in the floor or wall by this the counterey tension is made on the affected side, which upon the whole is preferable to making it upon the opposite side, as



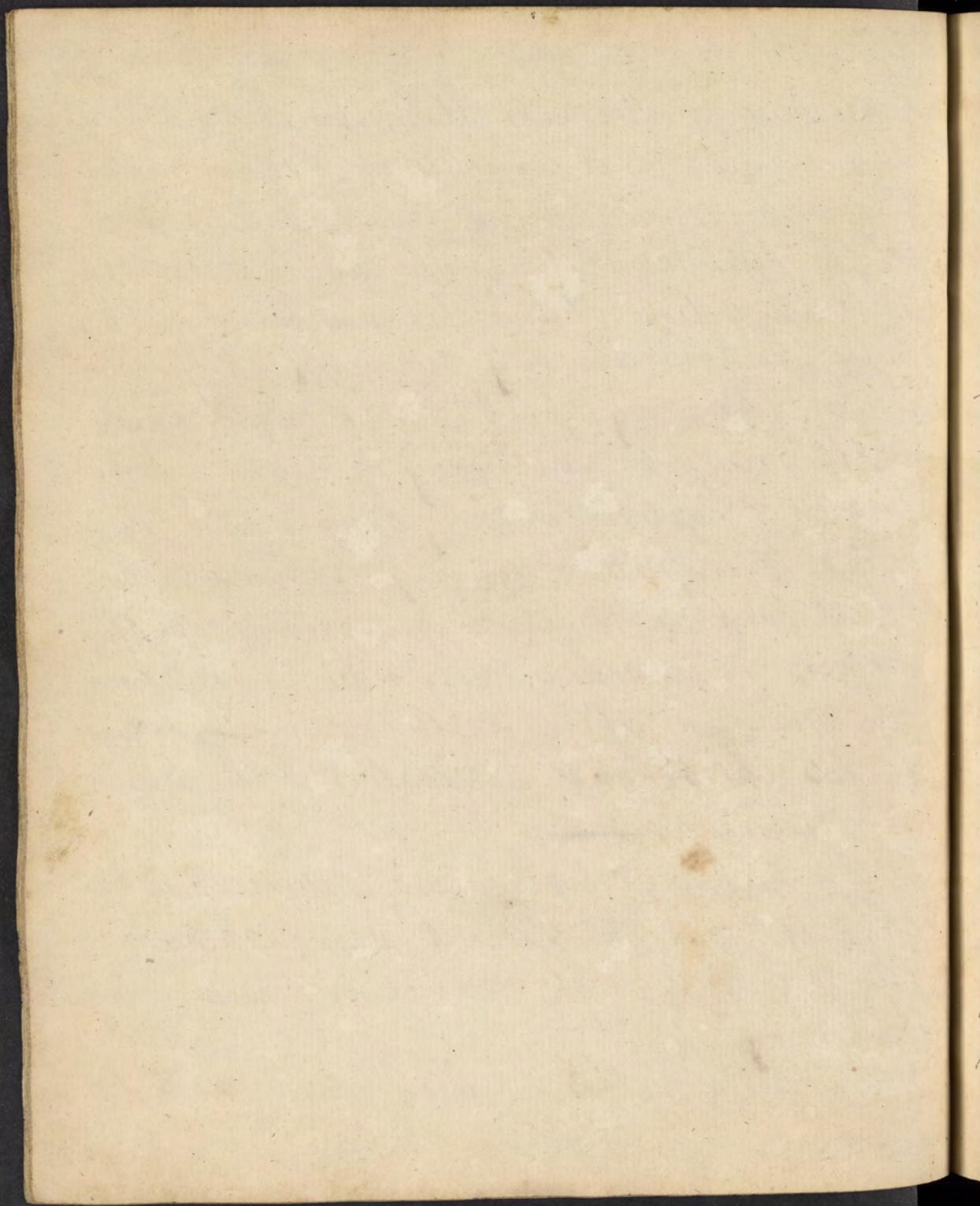
recommendation by Boyer — the extension is  
made by passing a towel around the thigh  
just above the knee, to which is fastened two  
strong straps one at each side, I prefer this  
to making the extension at the Ankle as ad-  
vised by the French & we are able by flexing  
the Leg to employ it as a lever, as the knee  
joint is not put upon the stretch, which is  
sometimes very hurtful, by this contrivance  
the first indication can be fulfilled & the head  
of the bone be brought to the brim of the  
acetabulum, after this, a band to fix the head  
is passed around the body, just below  
the spine of the ilium, & above the trochan-  
ter or head of the bone — this is fixed to  
a staple on the sound side of the patient,  
so that it cuts the body at right angles —  
another band is now passed around the  
thigh, as near to the perineum, as possible,



delivered to assistants standing in the affected view. Now it is evident, that the extension & counterextension being made in the direction of the limb in the manner above described, that the action of this second band would pull the bone directly outwards, the pelvis being fixed by the band at right angles to the body, or as it may be called by the second counterextending band; the bone being thus pulled directly outward - the head must in some measure be drawn from the pelvis, or in other words be raised above the Margin of the Acetabulum - which fulfills the second indication of the bone is reduced.

I have but one objection to this mode & that is that the patient being on his back the leg and thigh cannot be flexed when necessary.

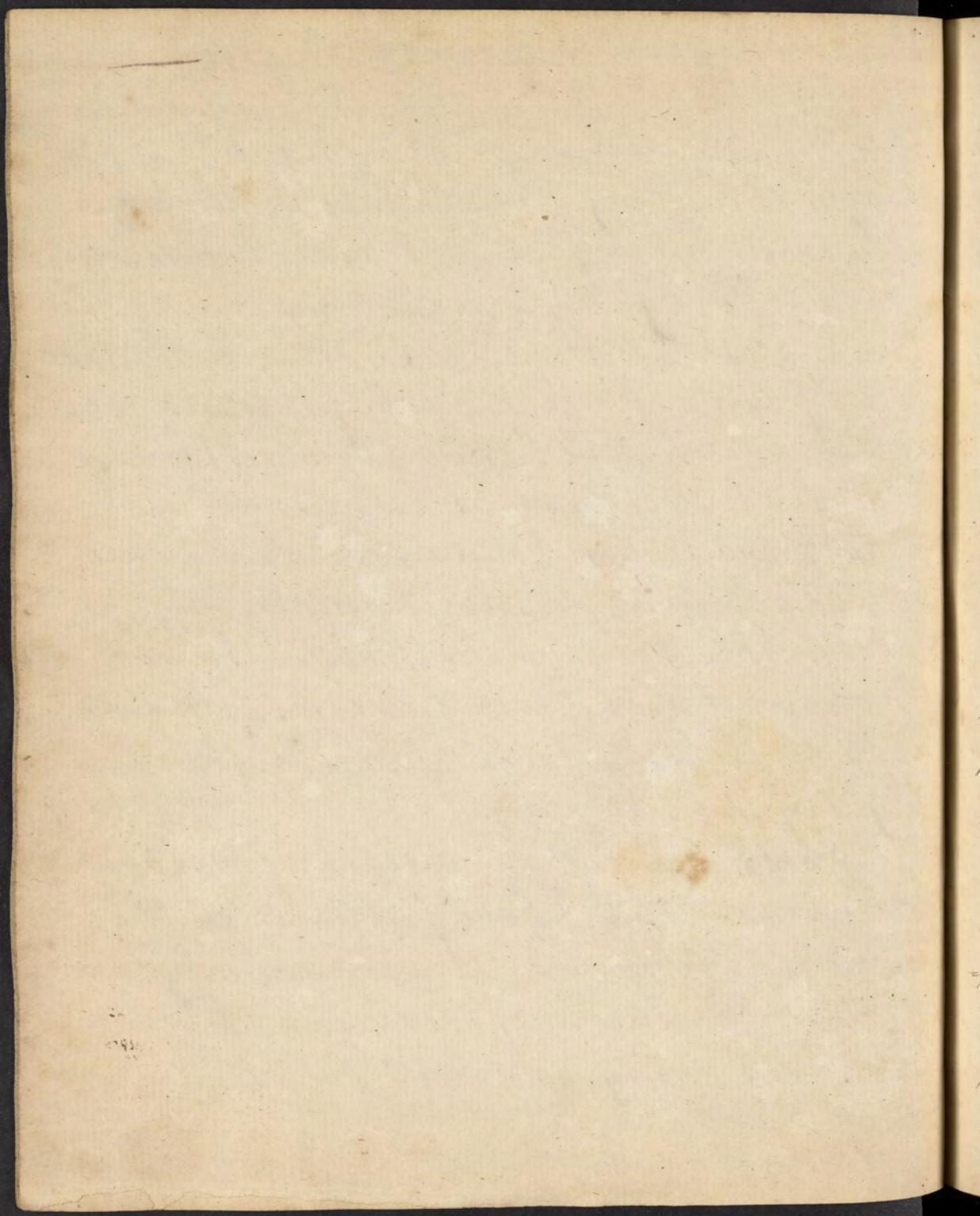
To obviate this, I have placed the ball



on his sound side, passed the second counterextending band around the pelvis at right angles to the body, through holes in the table & fixed it to the floor. — I made the extension outwards by passing the band around the neck of an assistant, who stood on the table & placed his knee on the pelvis; the extension and counterextension in the direction of the limb was made as before. —

By this means, I could bend the leg & use it, as a lever in rotating & loosening, the head of the bone from its attachments. — In this manner, I have never failed in the reduction of a thigh bone, being assisted in some cases by bleeding. —

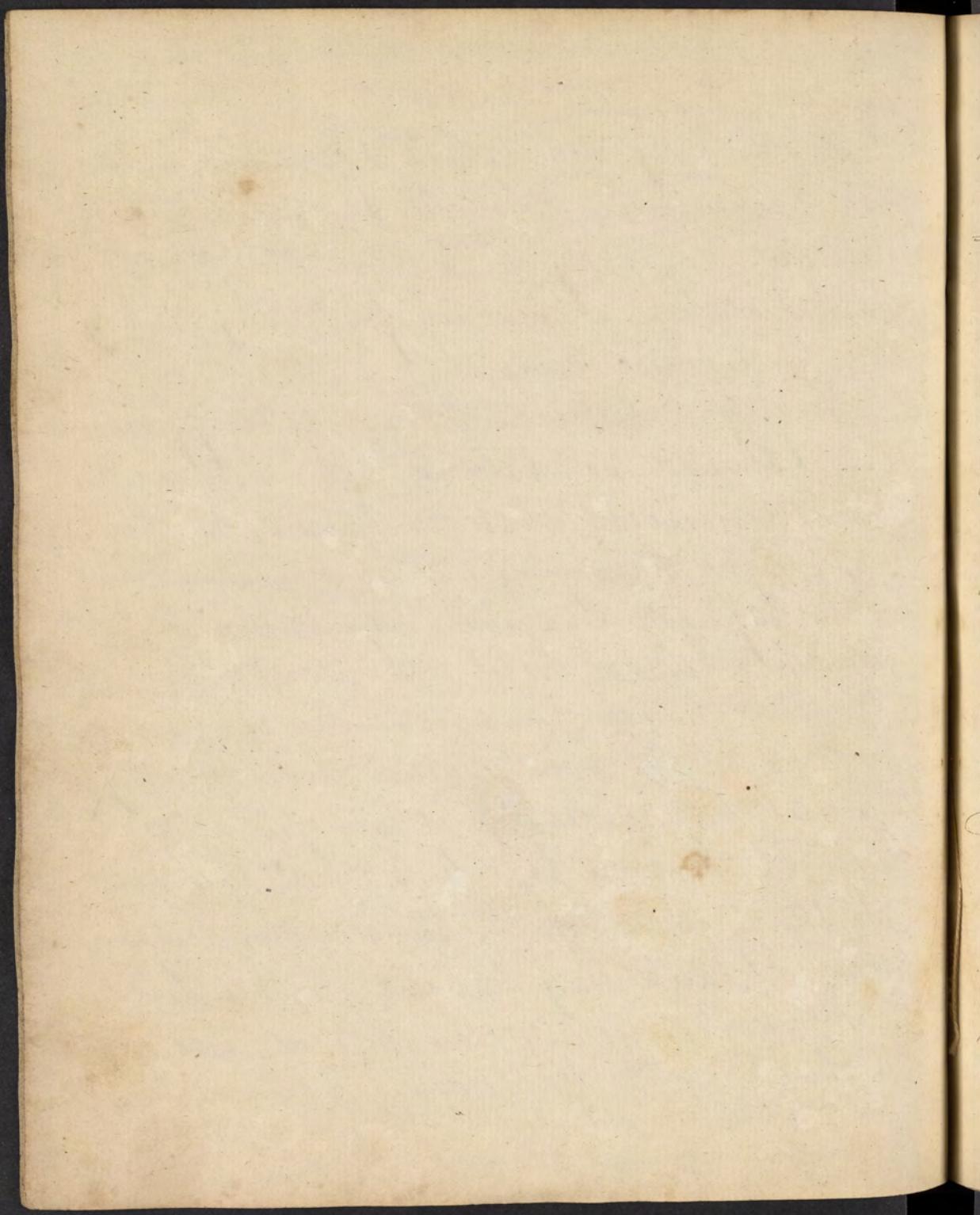
I have seen but one instance of luxation for ever — this I have published in the Medical Museum — it was caused by a violent abduction of the thigh — the patient was bleed yearly and with some trouble



was reduced.

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In the only case which I have seen luxation backward - I thought I would find no unusual difficulty in its reduction, but I was mistaken, I bleed my patient very largely, and persevered more than an hour, but with no success whatever. I began to be apprehensive I should not succeed, after a little reflection I conceived, that the head of the thigh bone might have passed through a small rent in the capsular ligament, as a button passes through a button hole, & therefore, the violent extension which I had made served to draw the neck of the bone against the extremity of this slit & thus render it impossible for the head of the bone to re-pass thro' this rent into the acetabulum - Under this supposition, I placed my patient on his side, and endeavoured to relax the rent, and reduce the bone in the following manner -



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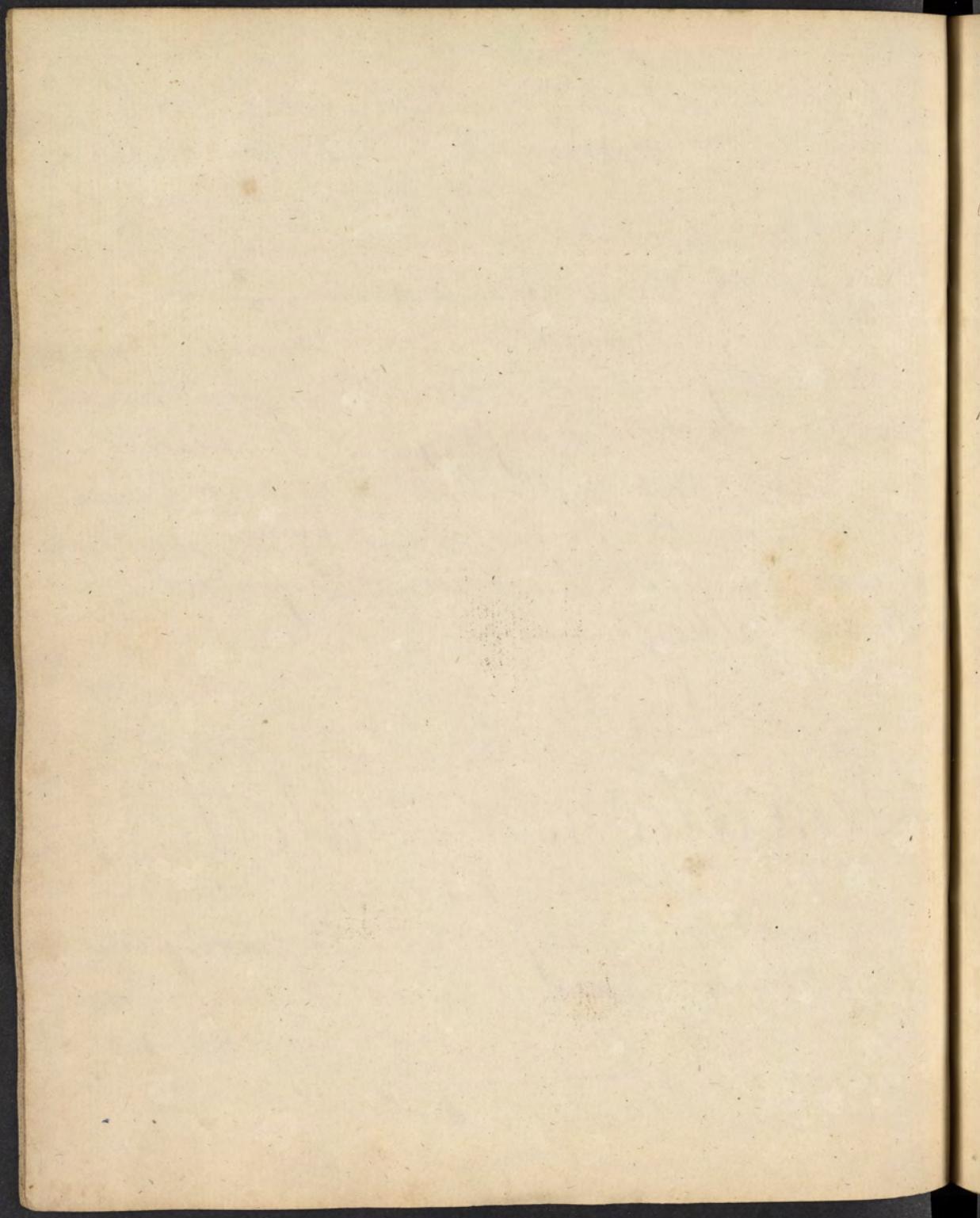
Look hole of the knee, & drew it directly  
unawares or performed an abstraction of the  
thigh, when this was carried as far as possi-  
ble, I struck the trochanter with my hand  
& drove the head into its socket. —

When Dislocations are not reduced, they  
enable the part for several Months — during  
this time Nature is employed in forming a  
new joint, which she does, as that some degree  
of motion can be performed by the limb,  
so that the part is not altogether prevented  
from walking. —

Lect. 32.

## Luxations of the Patella.

Sometimes occur, they are  
complete or incomplete. An incomplete  
luxation is, where it is not removed from  
the articular surface of the femur, but  
lies on one of the borders, this is recognized

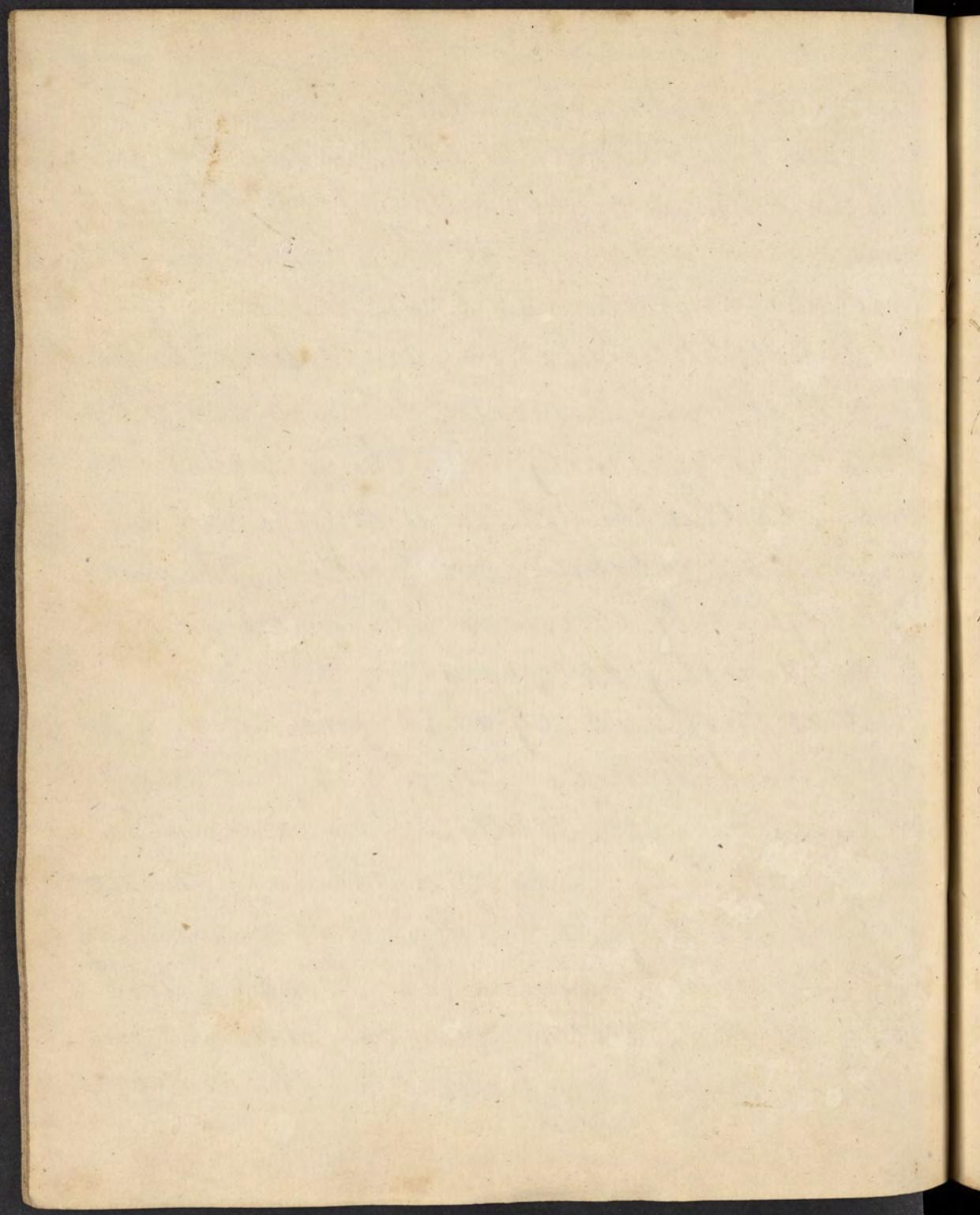


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by the deformity of the knee, the pulley like surface can be felt, as also the edge of the Patella & the anterior surface looks obliquely inwards or outwards, as the bone lies on the external or internal condyle.

The complete luxation are where the patella is entirely removed from its bed is very rare it is generally over the external condyle in this the Patella is thrown into a kind of a perpendicular position, the inferior edge looks upwards, the anterior edge lies directly outwards.

It is produced by great force acting, when the leg is extended - I have seen but one case of luxation of the Patella - This occurred in a young lady, who was dancing, she felt something slip at the knee and immediately fell - upon examination I found a luxation of the Patella over the external condyle - I put my patient on the bed exten-

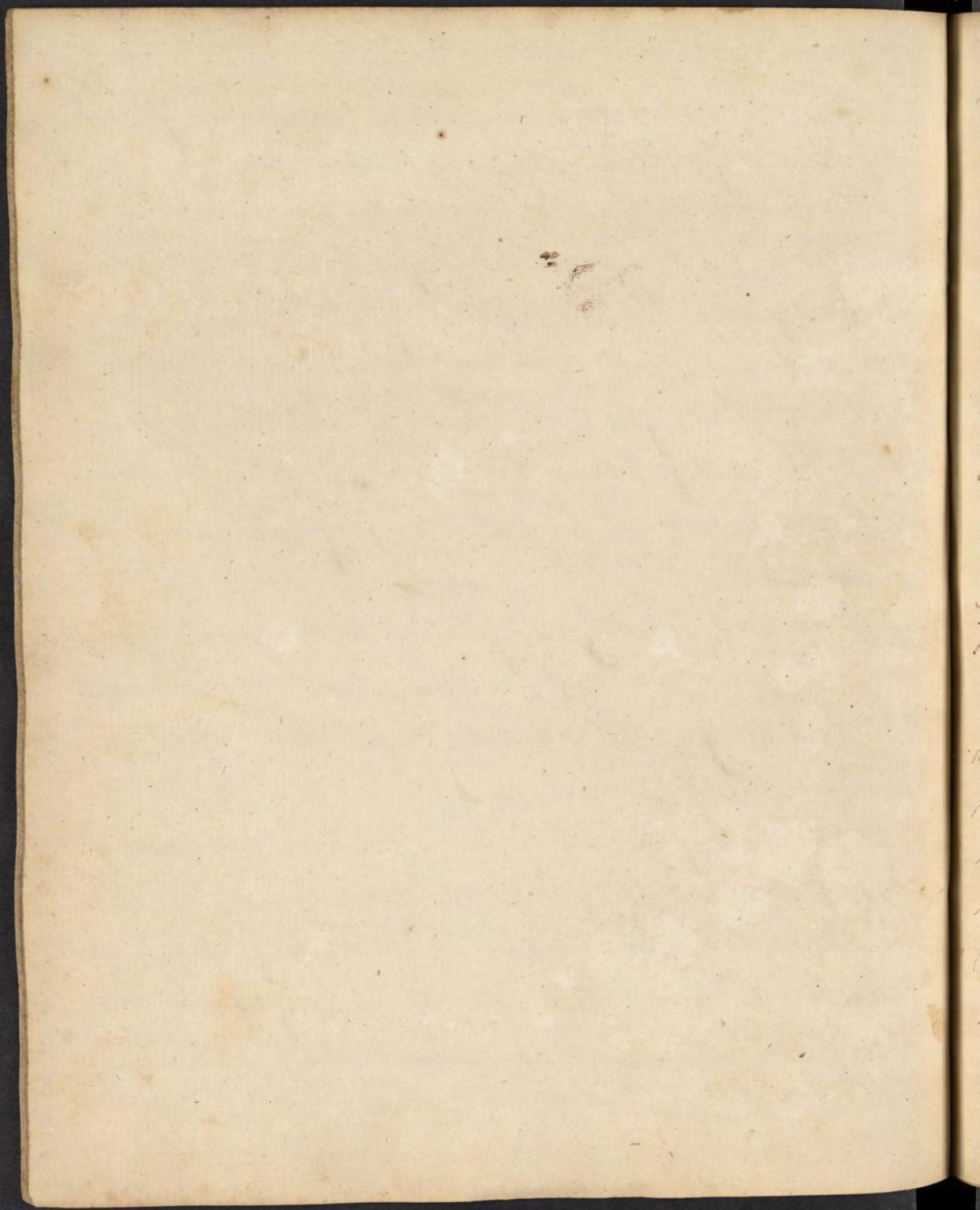


the knee & flexed the thigh a little on the pelvis  
& by slight pressure it was reduced.

Dr Dorsey has had a case in which the  
Ligature was produced by attempting to raise  
the body on the leg, as the patt. was getting  
into bed - the Dr. exerted much art, & also  
much force, but was not able to reduce  
it - Finally some motion of which he was  
not conscious - the Patella slipped into its  
place.

The difficulty appeared to originate from  
the contraction of the Muscles - if this should  
afford any permanent resistance of course  
would bleed ad deliq.

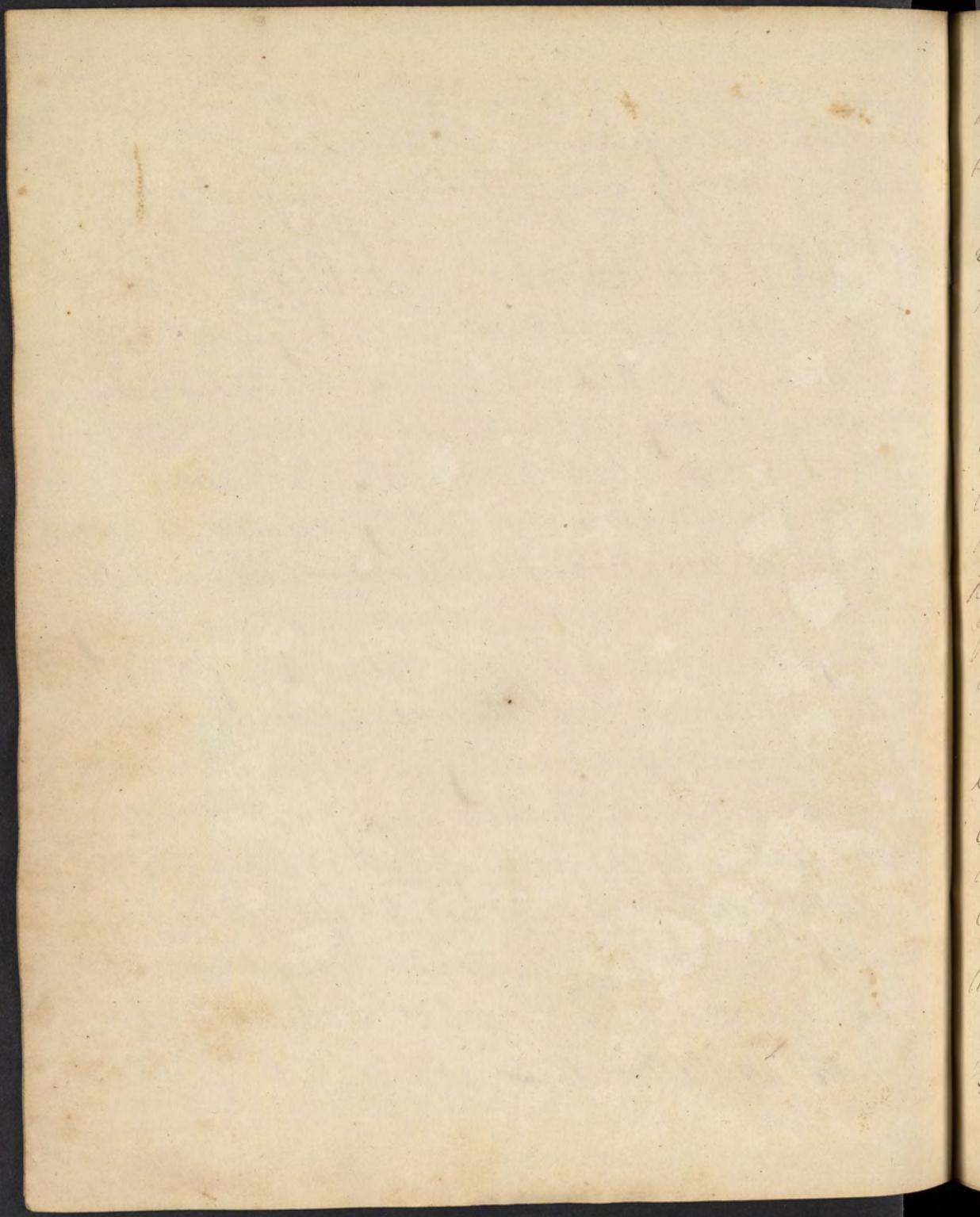
I have lately seen a person - who had many  
years ago a rupture of the tendon of the exten-  
sor Musc. of the thigh, so that the patella de-  
creased rather lower on the condyles, he had  
been previous to the accident for a considerable



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time subject to Rheumatism & by some sudden exertion the rupture was effected - at present there is merely a depression of the part

SUXATIONS of the KNEE at the  
Knee sometimes occur, but they are rare  
It usually takes place over the external  
Concava, rarely over the internal - Plethora  
relates a case of its occurring forward, &  
One of the Students has lately related to me  
a case of luxation backward - When it takes  
place over the external Concava, it can be very  
easily ascertained by the usual symptoms, &  
as the ligaments are always somewhat torn  
the reduction is also easy - After the reduc-  
tion the limb should be kept at rest for  
some time, By the long splint of Desaules wh.  
Should always be applied & kept on for several  
weeks, as the ligaments are very slow in愈ing  
the limb should not be used for 10  
weeks, or 3 months - as inflam. symptoms

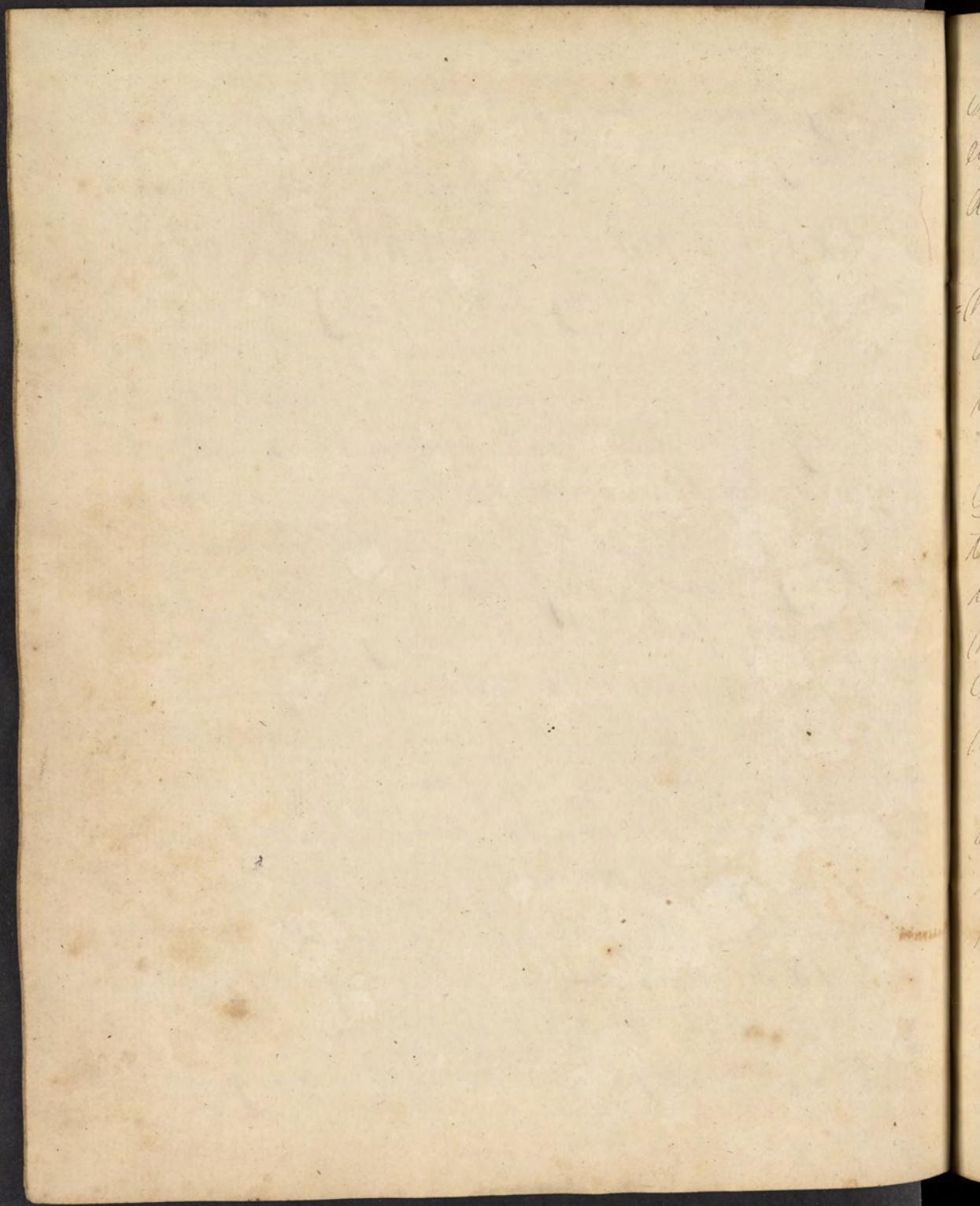


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usually occur, & I see are to be employed when necessary

Spirations of the Ankle generally take place laterally & externally & are usually accompanied with fracture of the fibula I have never seen a case of luxation forward A Lady wearing high heeled shoes, was running down stairs with considerable haste they caught in the carpet, the whole weight of the body was precipitated forward, and the foot being fixed, the extremity of the tibia, was drawn forward on the tarsus.

The Reduction was easily accomplished by unfolding & flexing the foot. But it was a long time before the consequent Inflammation subsided, & before the ligaments had so far healed, that the patient could walk, it was near 15 months before she completely recovered. You will be often called to examine the Foot after any considerable injury, which



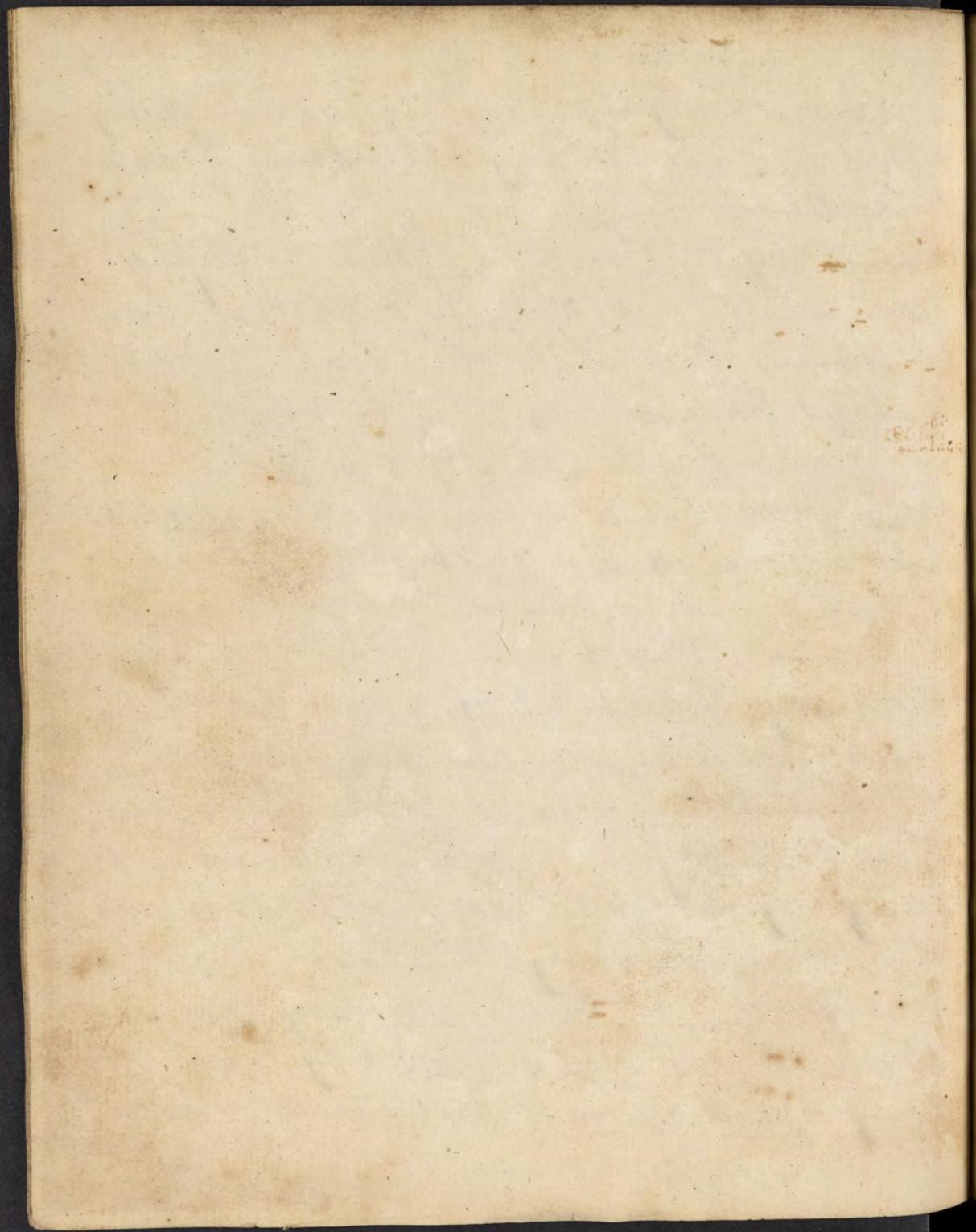
o succeed by swelling, to discover as they  
suppose it, whether any of the small bones are  
dislocated. —

In many of these cases, there is no displace-  
ment, which can often be determined from  
an examination of the other foot, in which  
the same protuberances may be discovered. —

There is another case of Luxation at the  
Ankle — and that is when the astragalus is  
thrown from its bed in the os calcis & there  
is with it, a large wound through the integu-  
ments. — In such cases it was formerly  
customary to Amputate the limb; but this is  
now discarded as altogether unnecessary. —

When the connections of the astragalus are  
almost destroyed. — When it adheres almost  
solely by its central ligament to the os calcis,  
it is best immediately to cut it off. —

Ankylosis will be the necessary consequence  
whether this is done or not — & by taking it  
away a next source of irritation is removed. —



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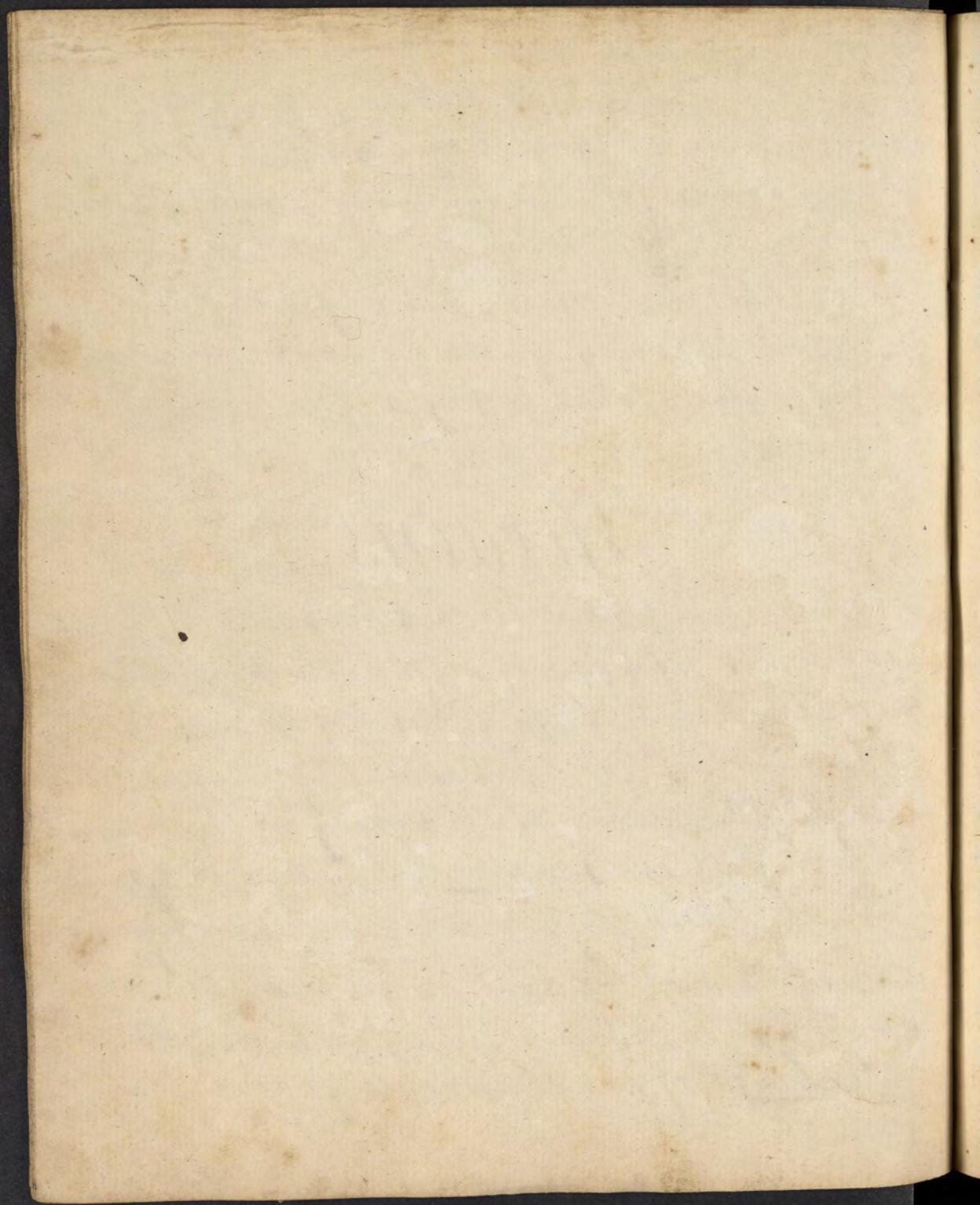
Do not think that I advise you in all dislocations of the Astragulus to remove it. By no means. It is only when its integuments are so much destroyed as to render it improbable that its life can be preserved. —

Before entirely quitting the injuries of the joint I wish to say a few words on Sprains. —

## Sprains.

These consist in a straining of the ligaments of a joint, often to the length of tearing some of the fibres & of contusing the whole. — It is always of importance to decide the nature of the injury to the joint, whether it is Fracture, Luxation, or Sprain.

In the latter the Surgeon can move the part, which cannot be done in luxation & no crisis is evident as in fracture. — This stretching of the ligaments produce pain

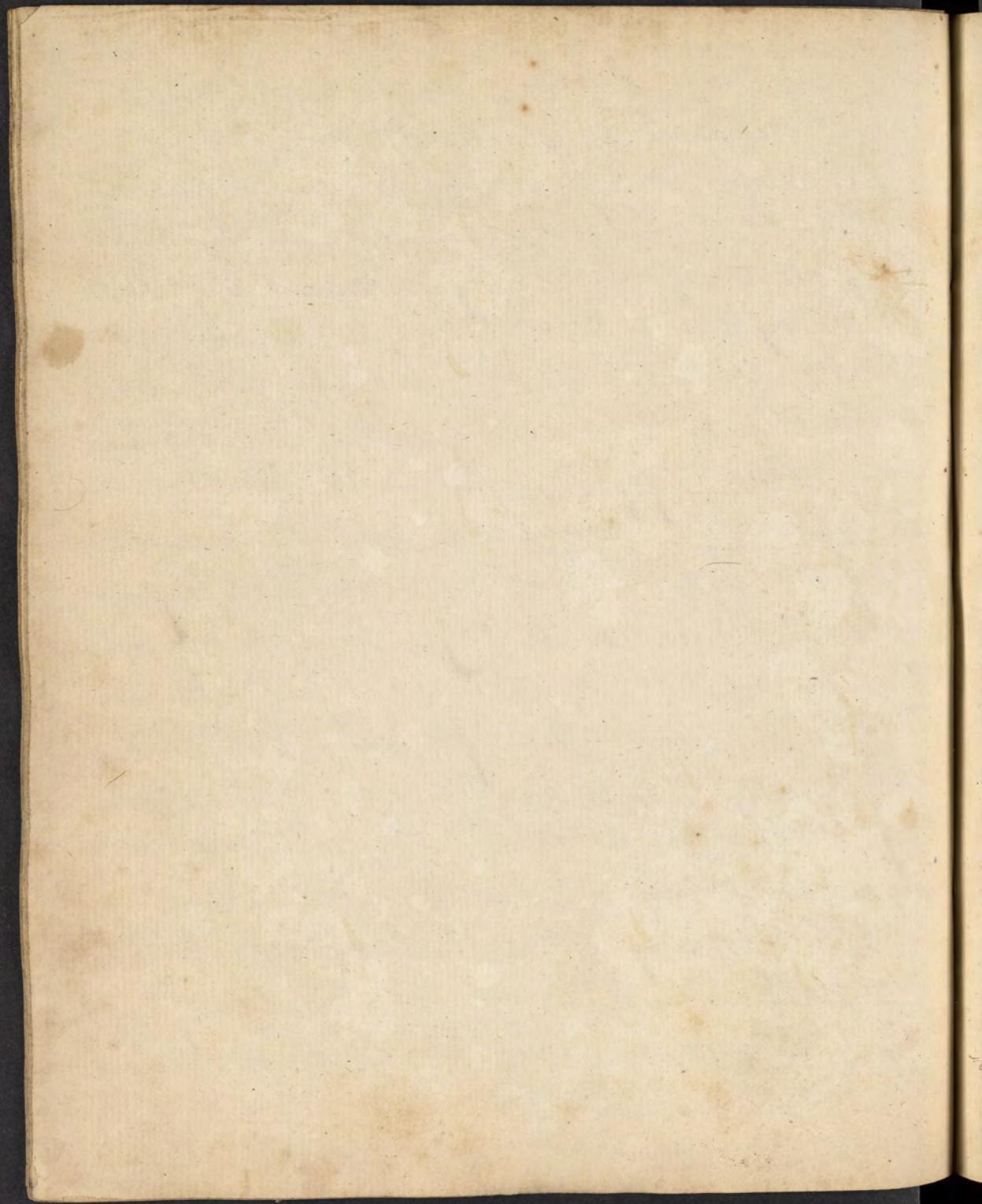


Swelling, and it is a long while before the joint resumes its functions. —

I consider this accident as worse, than a fracture & for this reason, that in the latter the part very unwillingly remains at rest, till every thing has healed, but in the former "he says that it is nothing but a sprain", and soon thinks himself capable of moving. —

The best application in the first instance is Cold water pourelled in a small stream on the part for at least an hour, and repeated several times in the day — sponges dipped in Vinegar & water should be put to the joint, but in the use of these applications in females we should remember the state of their monthly discharge, as cold to the feet might induce suppression. —

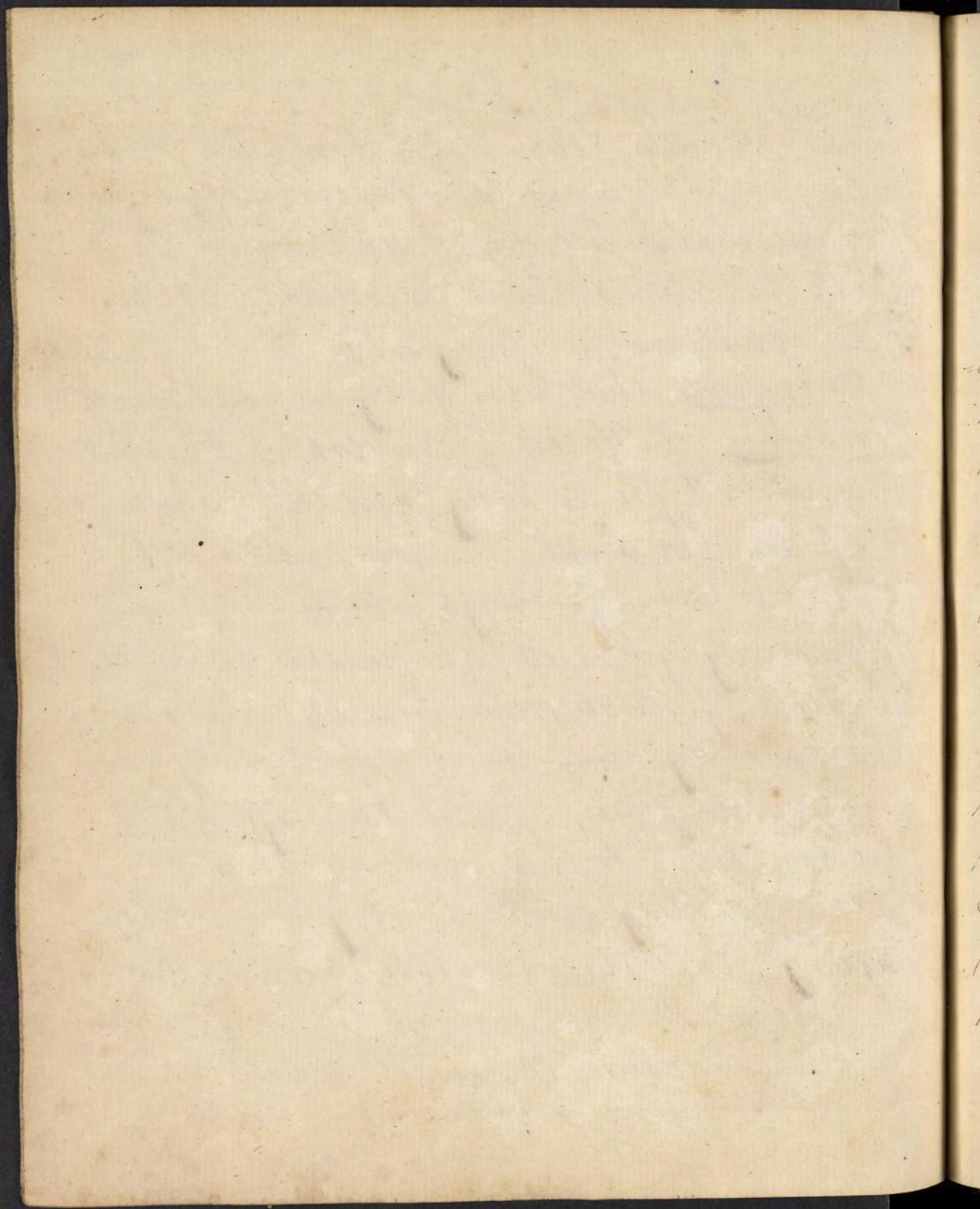
If the injury is in the lower extremities the part is to be put to bed — I kept at perfect rest, this is to be cont'd. for a considerable time



If neglected the joint will be for weeks, Months, even Years, sometimes terminating in suppuration & consequently a profuse discharge occurs, under which the part sometimes sinks, rendering amputation sometimes necessary.

To impress this more fully on your minds Remember the following case which I have seen. — A young Lady had the misfortune to sprain her Ankle, she was ordered to keep it at rest for a few days, she did so, and it apparently got well, she walked about, the swelling, pain &c returned — but were again dissipated by rest, this course was repeated for several times, at last I was applied to for something to this obstinate case. —

I immediately explained my views of the injury, that the ligaments were in a state of inflam<sup>n</sup> & that rest was absolutely necessary for a considerable length of time with



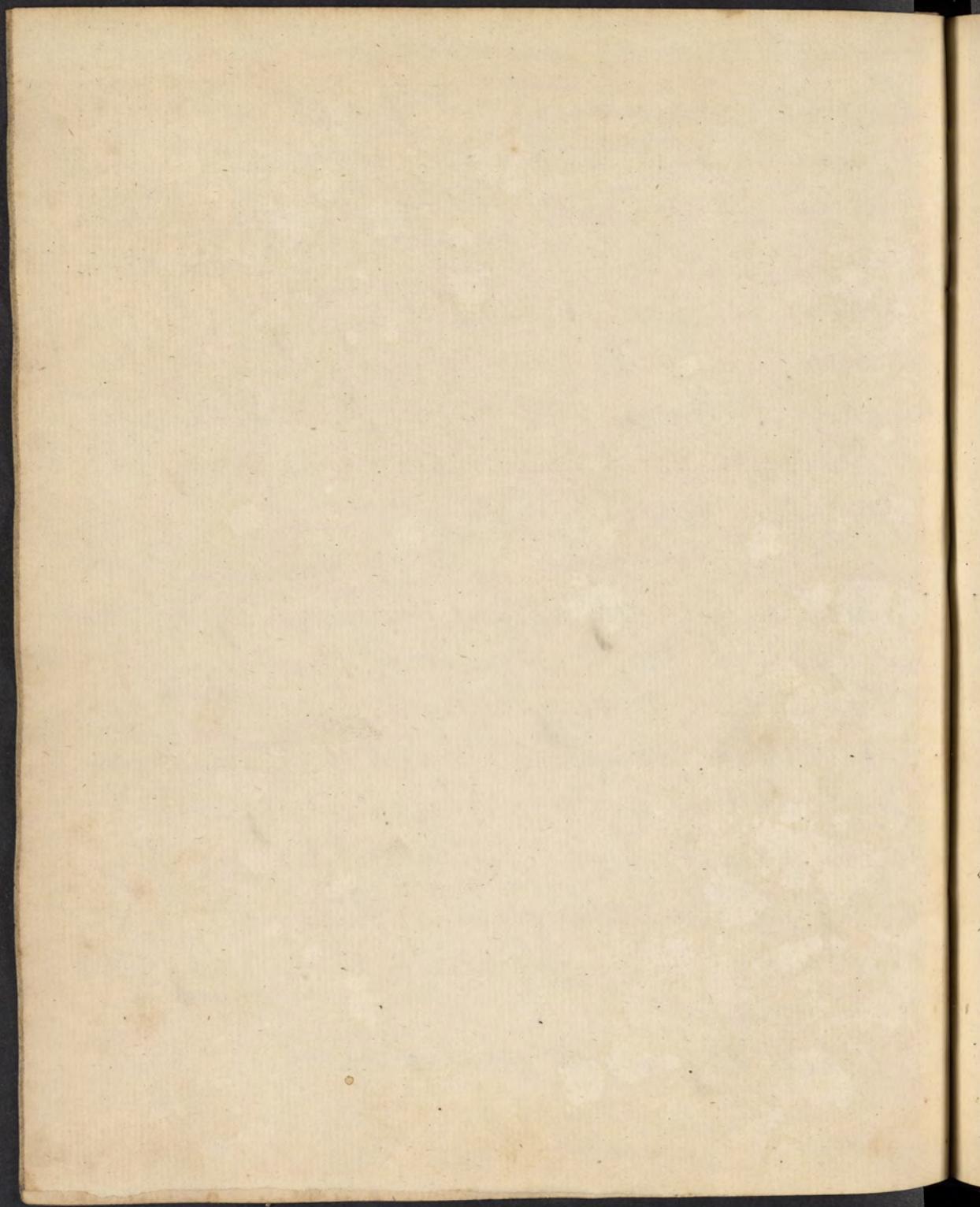
the use of evacuants - but that the injurious treatment that had been adopted had perhaps rendered it impossible to prevent suppuration.

I however put her to bed - employed general Hospital evacuations - but to no purpose, suppuration ensued, the Ostragales, escales & fibres became carious. Her Health sunk - she refused to have the limb amputated & consequently died  
Die of a Sprained Ankle.

I have seen other cases of a similar nature, which sufficiently evinces the propriety of strict attention to the treatment of sprains.

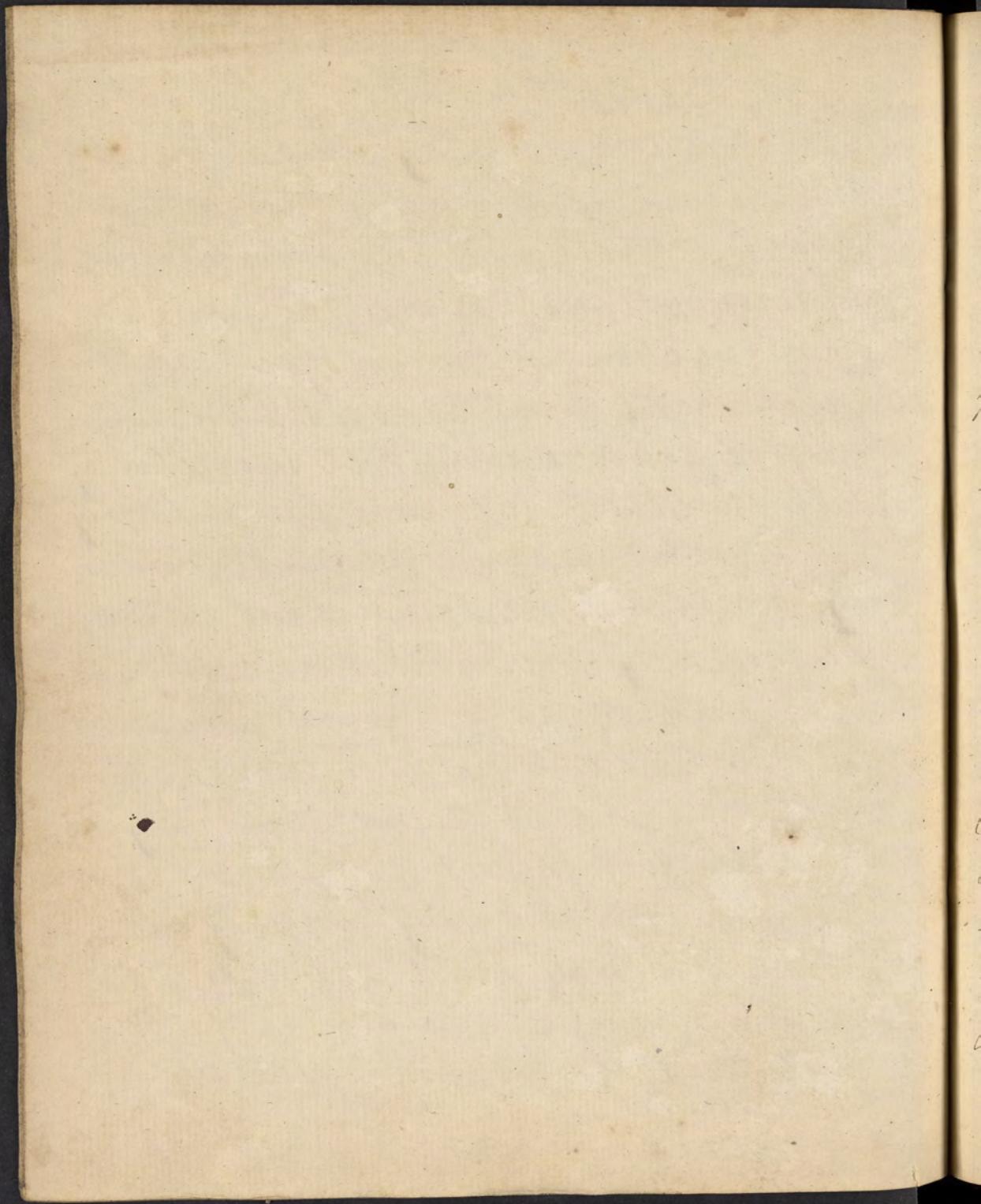
The wrist is very often sprained & the part applies for something to rub it - this will be of no service, you should apply a splint to the arm which should remain on for 3 or 4 weeks, this will be sufficient, but without it nothing else can be of any great service.

I shall say a few words on the subject



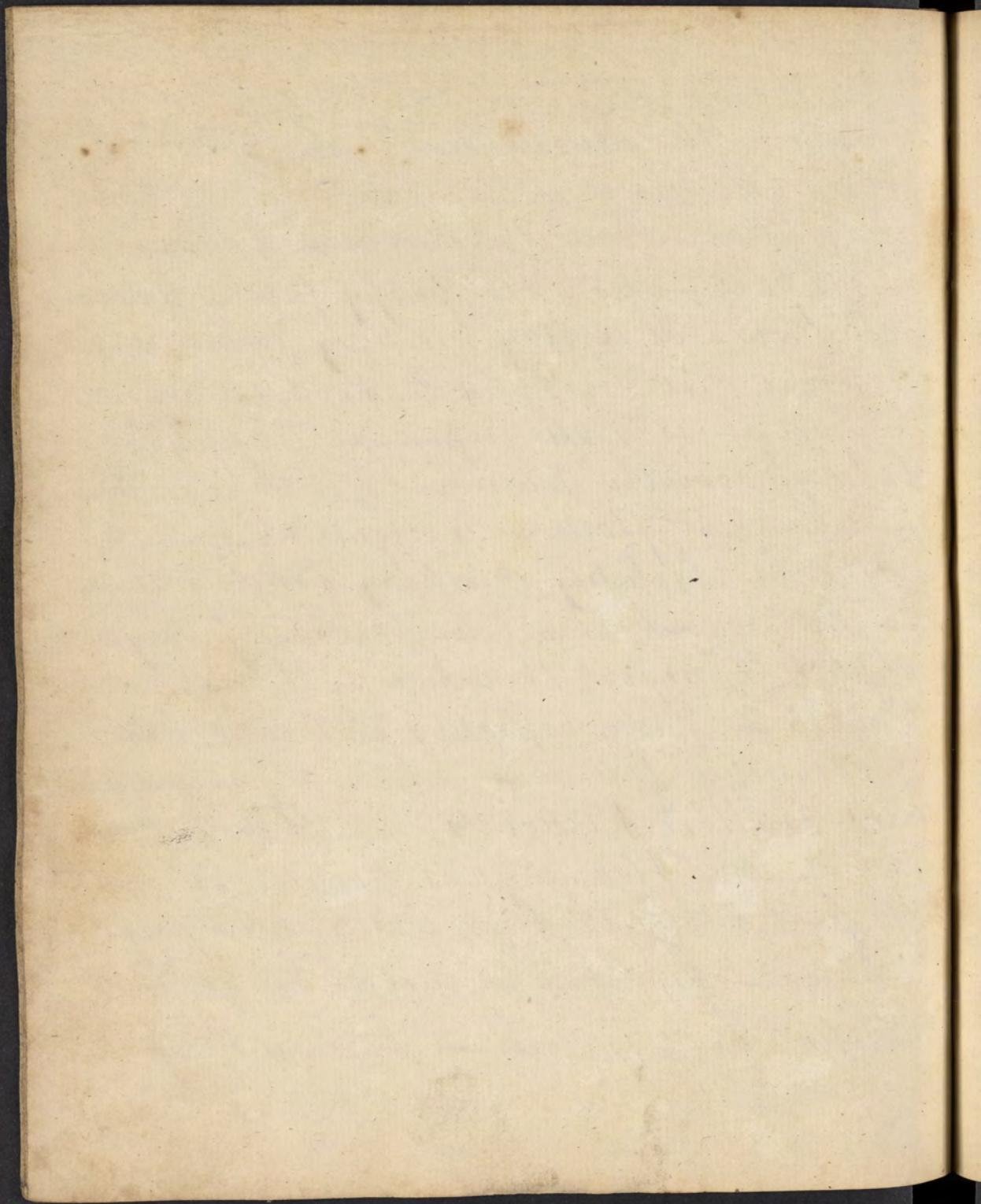
I have mentioned already, that the accid.  
Muscle is sometimes so contusee that it cannot  
be exercis'd. I have often been consulted under  
these Circumstances, the part. Considering  
the bone luxated if however you can move  
the joint in all directions it is not luxated  
the loss of power is owing to the severe blow by  
which the Muscle is in some measure paraly-  
sed. As to the treatment little can be done, time  
only is required. You should direct the part  
to be frequently moved & that the part him-  
self should make an exertion to use it.  
But you will be called in to prescrib'e some-  
thing. In such cases do not direct any plas-  
ter. As this will prevent the part. using  
the Muscle which is very necessary, but  
whatever you may direct let it be in the  
form of a liniment.

Rupture of the Fibres of a Muscle from



some sudden irregular action every now & then occurs - This usually seen in the ~~Scutum~~ - I have also seen it in the ~~Scutum~~ - In the Deltoide - there is always some discolouration at the part - also a soft pulpy feel, at first some depression - It is only necessary to keep the parts at rest for 3 or 4 weeks, till union is completed - it is also important to apply a bandage over the muscle - If in the lower limb a recumbent posture is requisite.

If it be absolutely necessary for the patient to move about then some machinery may be applied to prevent the action of the injured muscle - From neglecting these cases, bad consequences follow - I knew a patient who was confined 12 months - At the end of ~~of~~ which time I found great tumefaction of the part & that the limb was useless - I applied a splint - kept him at rest in bed for 4 or 5 weeks & he was well - In cases of ruptd.



Under Achilles, Splint is to be applied and the part kept still.

## Lect: 33<sup>o</sup>.

### Injuries of the Head

The Scalp is liable to different kinds of Injuries formerly mentioned first—

### CONCUSSION

When the Scalp receives severe blows, you always find a soft flabby swelling; there is nothing like the resilience of bone, this gives to an inexperienced person the idea that the bone is broken & beaten down.

Influenced by this, it is sometimes customary to cut down to examine the bone, I have known this to be done, & the bone found to be unhurt On this account you must never cut down to examine the bone, unless you have symptoms

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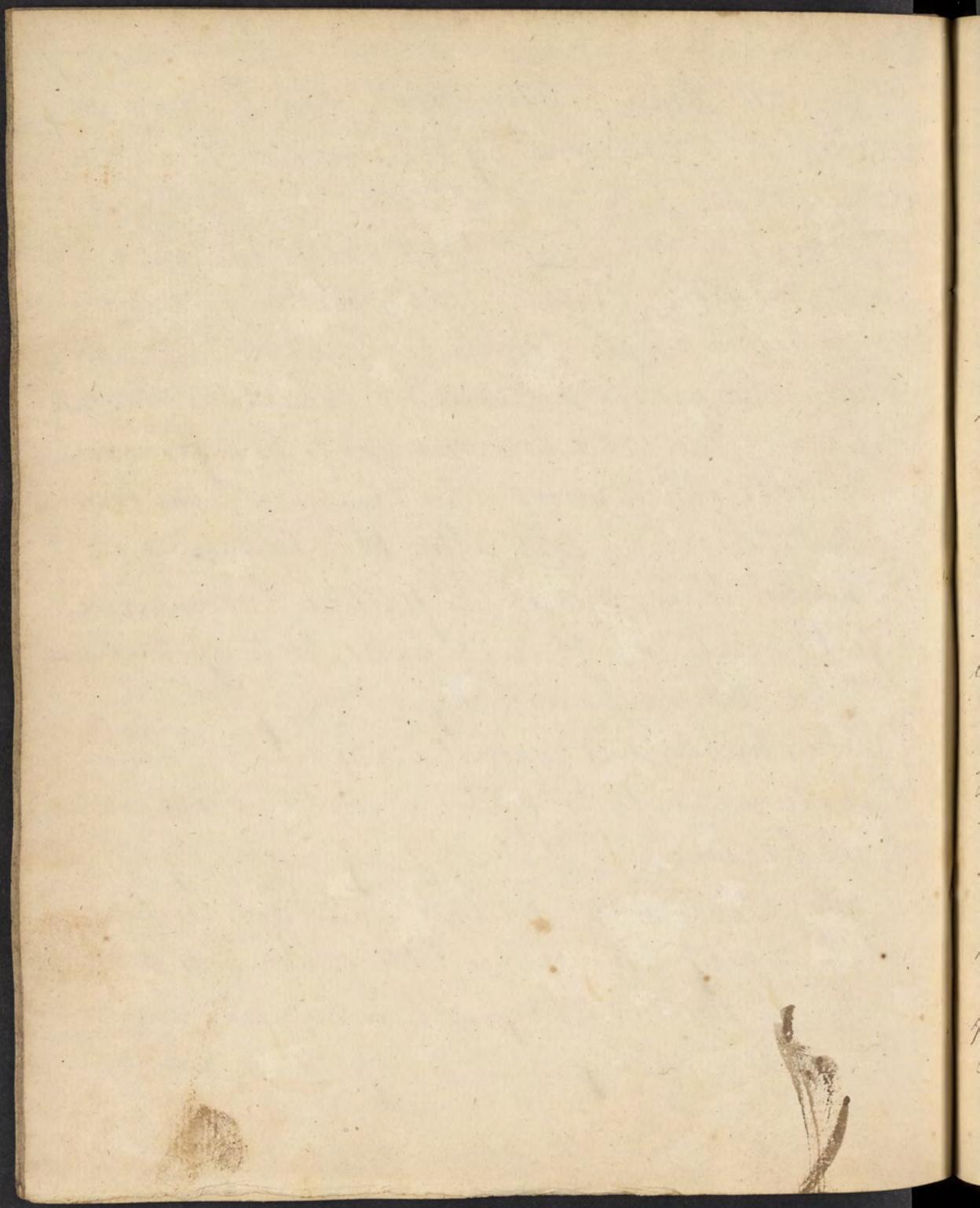
of injured brain. Often when this incision is made, it is followed by extensive inflam<sup>n</sup> & caries of the bone.

In Cases of Contusion to the Scalp the hair shd be removed — Cloths running out of cold water or vinegar & water are to be applied to the part. Every thing is to be avoided which will excite inflam<sup>n</sup>. Rest and low diet are to be enjoined.

If notwithstanding this treatment, the blood is not absorbed, even after 10 or 15 days, & it remains fluid, also if the patient becomes restless & impatient; It will be right to open it.

This should be done by a small puncture & after the blood is evacuated the lips of the huncetura, are to be approximated with adhesive plaster, so that it may unite by the first intention — In this manner the sides of the cavity also unite & the whole gets well.

If on the contrary a free incision is made the whole cavity will suppurate & often

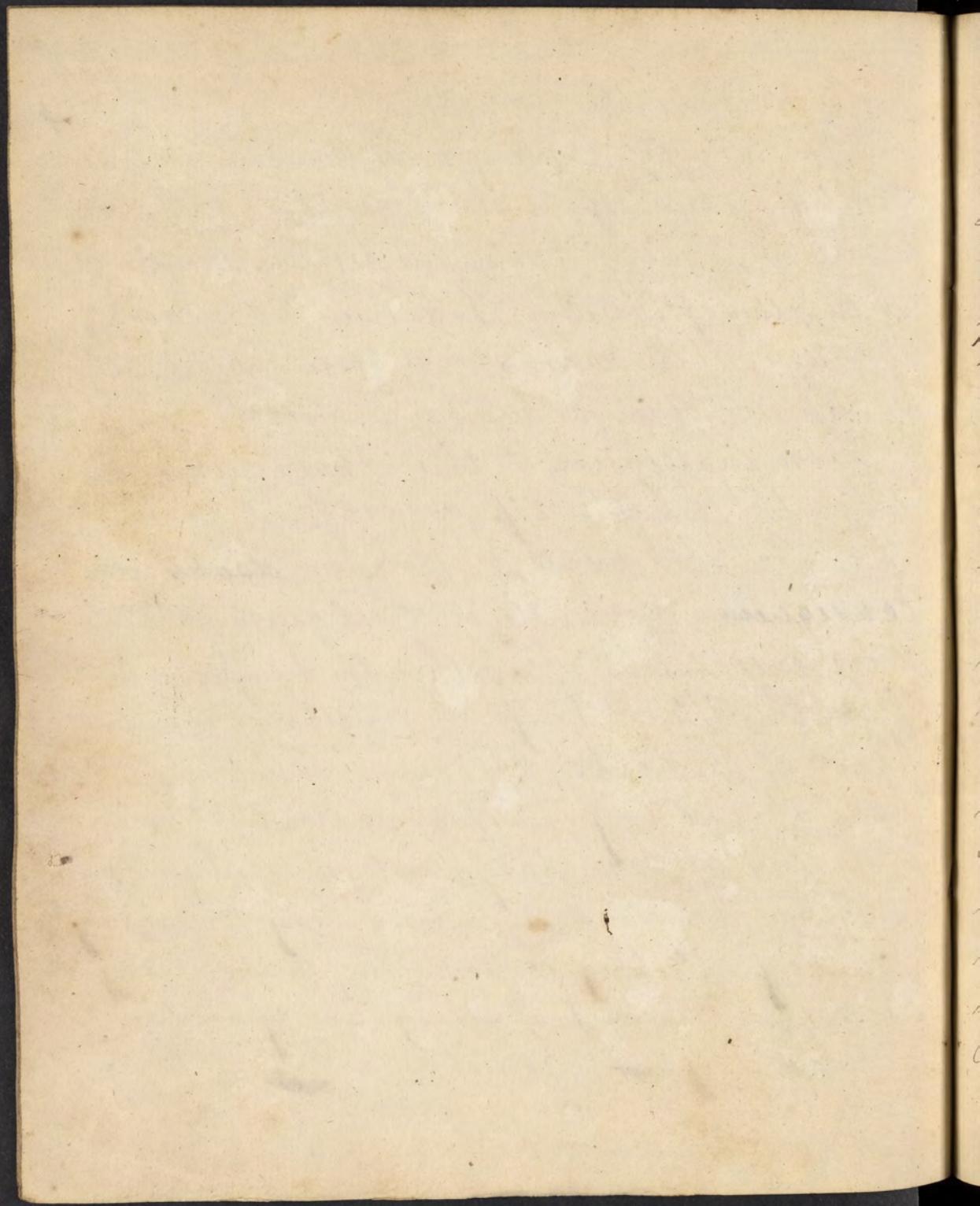


carries will be the consequence.

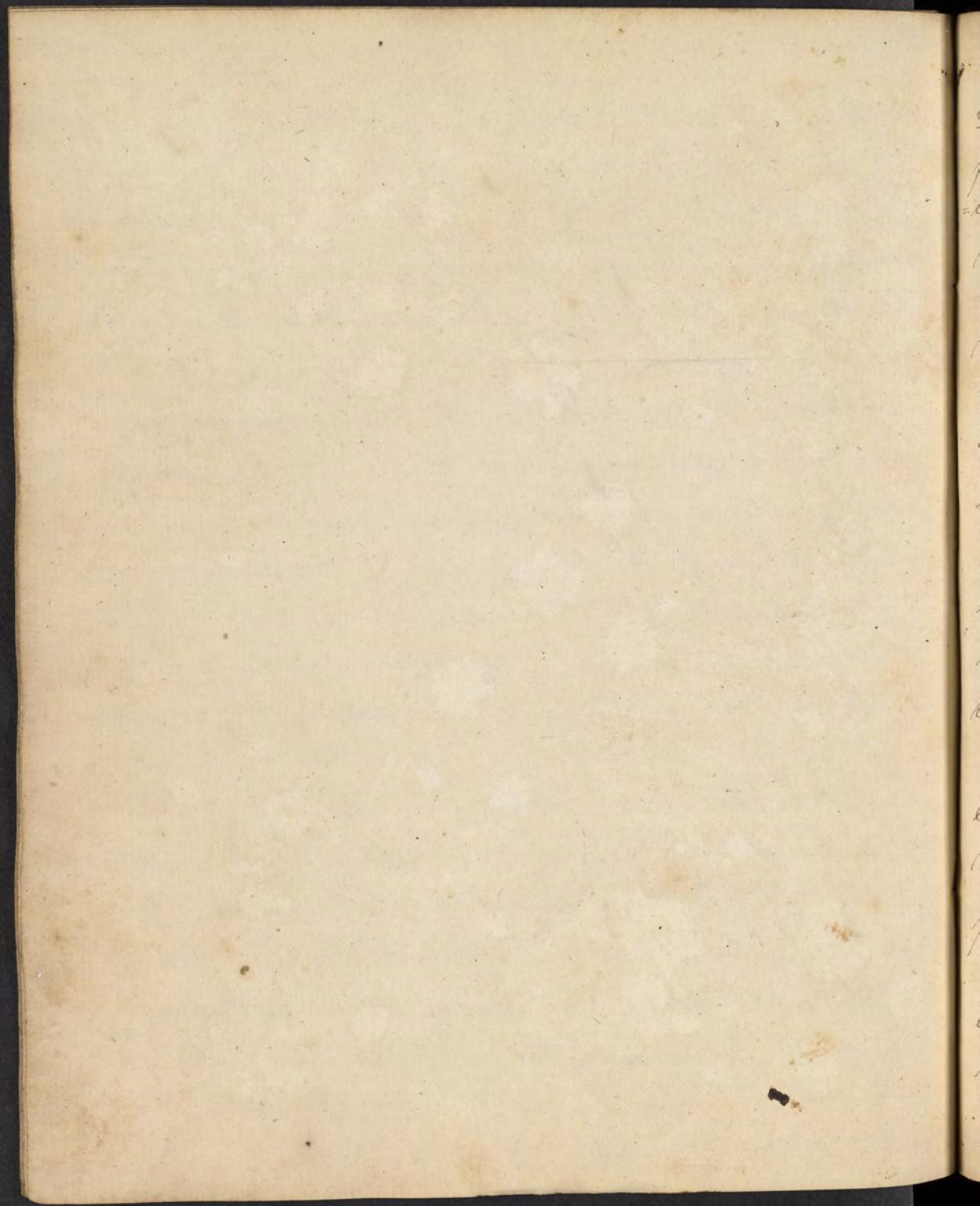
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In this way Contusion of the Scalp is to be treated; the Scalp is also subject to different kinds of Wounds & demands similar treatment as in other parts. — Take care not to bring the edges of the wound into close Contact, either by adhesive Stu<sup>p</sup>y or Suturing.

From inattention to this, I have seen a case where the whole Scalp was inflam<sup>d</sup> accom<sup>d</sup> with Fever, Headach & delirium, ~~doubts~~ The consequence of this Fever & delirium Doubts were entertained, whether the symptoms arose from the inflam<sup>d</sup> Scalp or whether from inflam<sup>d</sup> of the brain, & of course whether the bone should be perforated or not. It was a matter of some surprise to me why this question should be agitated, very fortunately for the part, they determined (without any particular reason) to delay the operation another day. — Now it is a Rule which



You should remember, that it is very rare  
for two sides of a Cavity to be inflamed at the  
same time — If the Villous Coat of the Stomach  
is inflam'd, the peritoneal is not, & so of other  
parts — Wherefore whenever there is a violent  
inflam'mt ~~of the~~ <sup>of the</sup> parts, it is so true, that when  
inflam'mt of the skin: heat: comes on up: of  
the Scalp — or any part of its subsidies — even  
the secretion of phus which have commenced,  
immediately disappears — This agrees with  
our practice in all inflam'mt of interior parts  
to relieve them One of our most effectual means  
is the inducing inflam'mt externally by a blister  
In every case of inflam'mt of the Scalp is to be made  
by V. S. low diet leeches & by the application  
of a blister — which will often stop it when  
early applied — Wherefore whenever there  
is violent inflam'mt of the Scalp it is proof  
sufficient that the brain or membranes  
are not inflamed — Sometimes in —

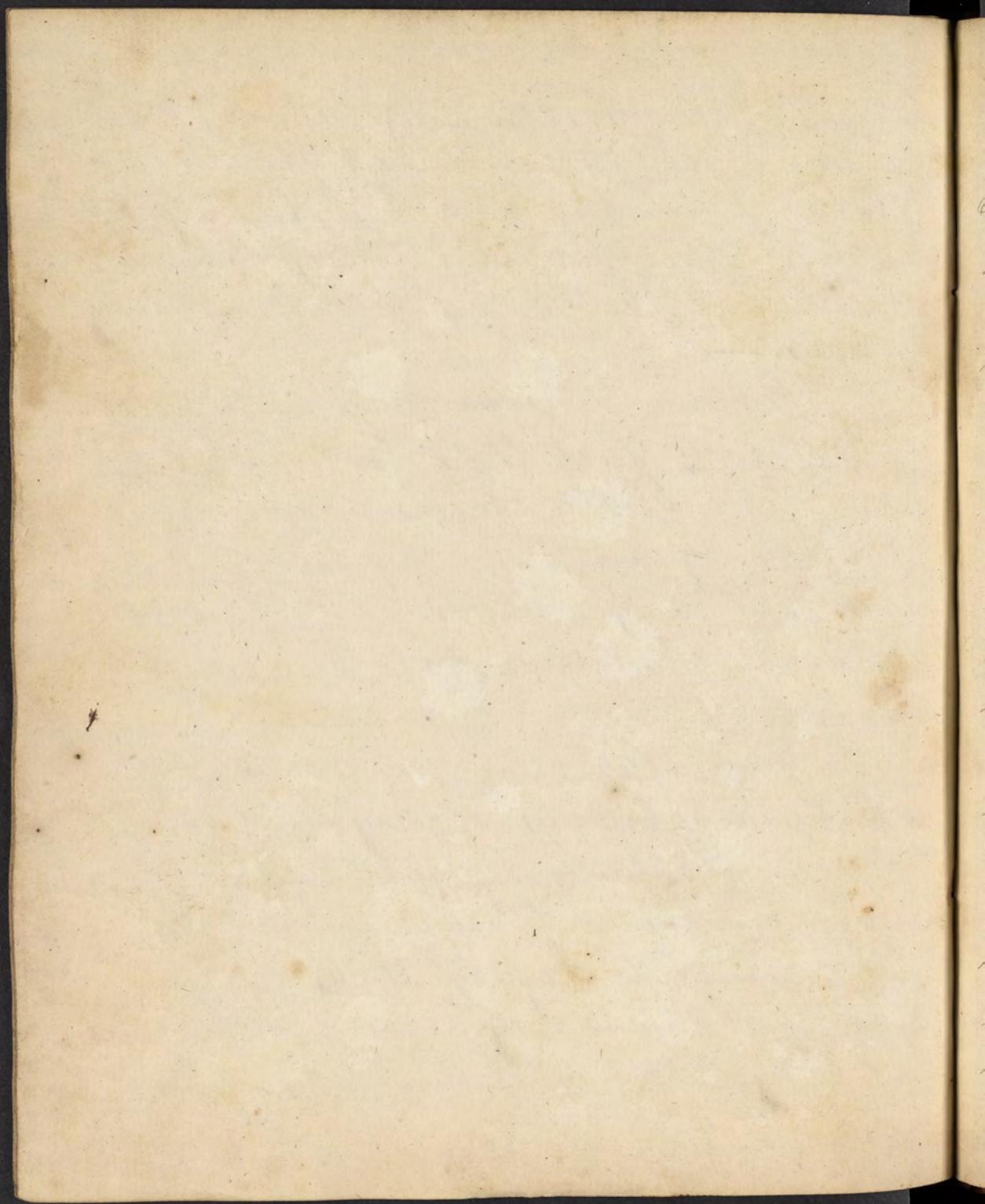


Contused Wounds of the Scalp, there is a large portion of the integument torn from the Cranium. I have seen near half the Scalp separated in this manner & the flap hanging over the ear, but the size of the flap are very various. —

The older Surgeons were in the habit of cutting off such flaps, for fear that the bone might become carious underneath it; if it were replaced & that they could not in such cases easily get at the parts of the bone. — Nothing could be worse than this practice. —

The flap after being well washed; all extraneous substances of every kind being removed, should be replaced & kept in its place by adhesive plaster. —

It is usual to employ sticks in such cases; but this is very wrong: as the scalp is torn by force — if sticks are employed

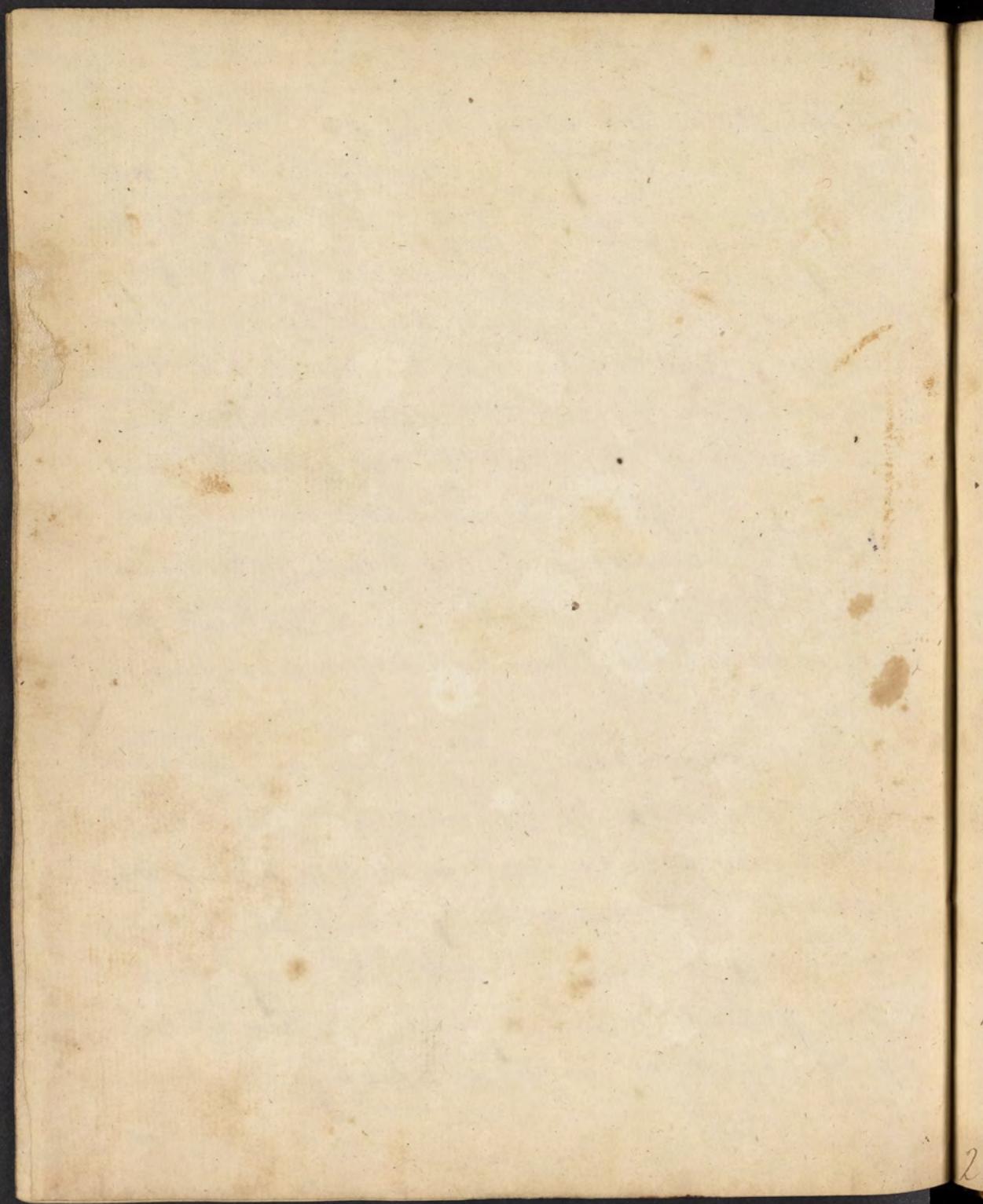


Inflammation will put every thing on the stretch; there will be great pain, delirium, & often Mortification. — The edges should be brought nearly together; so as to allow for the escape of fluids & to suffer the parts to swell without stretching the whole, sometimes when drawn close over the hard Cranium — the swelling has been so great, that the circulation was actually stopped and the part mortified —

If suppuration, takes place underneath, openings must be made to evacuate the pus, or if exfoliations, then cut down and remove them —

It is proper however for me to make some remarks on the death of the bone.

When the bone is dead — it has a dull white colour — sometimes only one table is dead and sometimes both — the sound <sup>remains</sup> ~~are~~ open, till exfoliation takes place; when it can be removed it should always be done

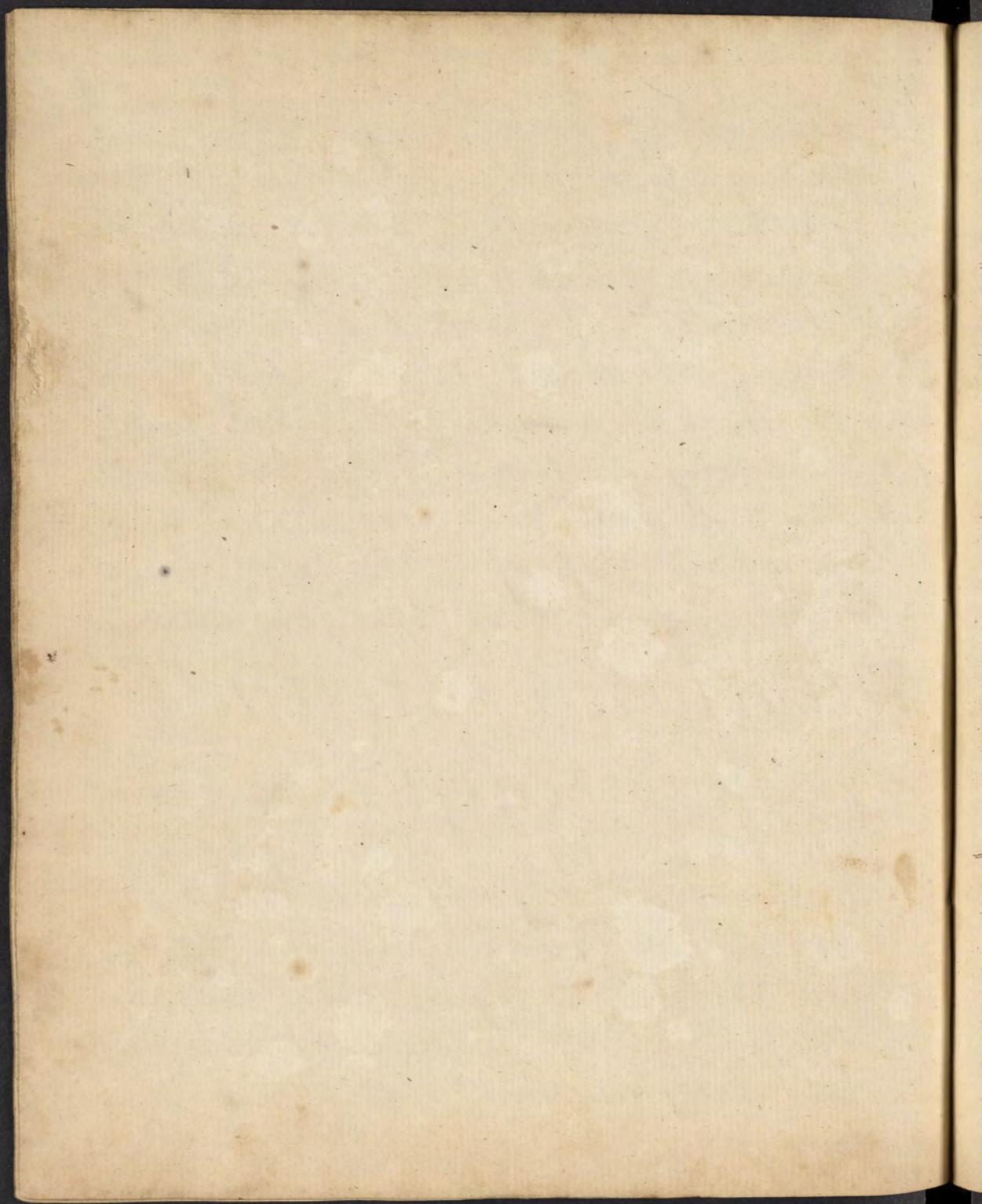


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As then the sore will seal up & otherwise  
the dead portion would become tighter every  
day & the wound discharge a thin serous  
matter. Inexperienced Surgeons are very  
apt, to wait for the bone to become loose,  
but you should extract it, as soon as it is  
in the least loose — And then you will  
have a simple Ulcer — but if you do not  
do this — the bone will become more fixed  
the sore will keep open & the fatal disagree-  
able discharge continue for a long time —

## Punctured Wounds of the Scalp.

are usually attended with violent  
inflammation of the erysipelasous kind exten-  
ding over the face, in such cases the best  
plan would be to lay open the wound,  
if the flat object — a small blister will  
prove very useful. Other evacuations

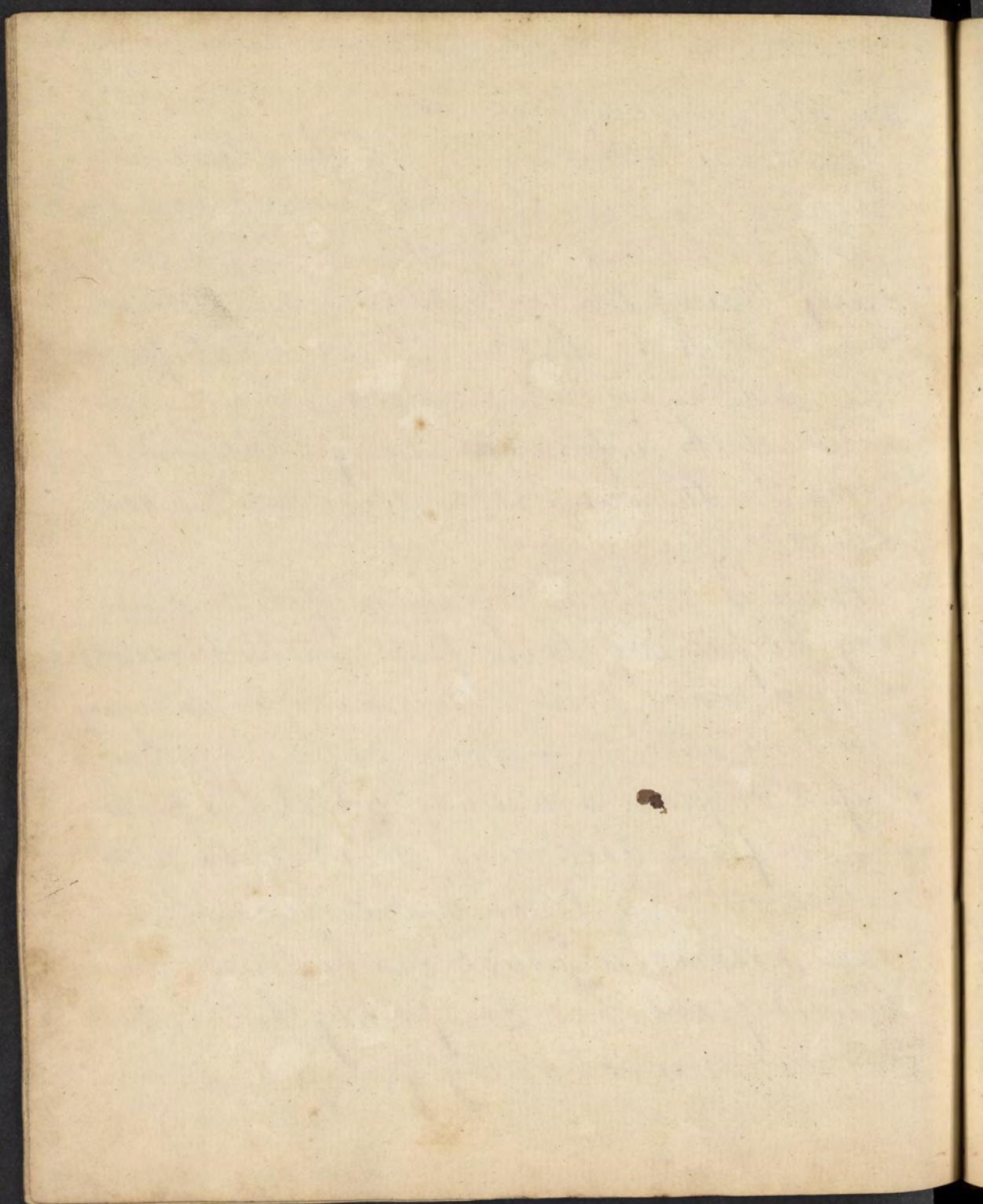


are also to be employed.

Sometimes after a blow on the Cranium  
detaching the Skin, the parts having been dry  
and with Sutures, the part will have a dull  
heavy Pain; over the Cranium — he will be-  
come restless & impatient, Fever will supervene  
& even delirium in some cases.

Now all the unpleasant symptoms arise  
from the Sutures, when these are cut out  
they disappear.

There is another condition of the Cranium  
very perplexing to the patient and his surgeon.  
This is where pain supervenes upon an injury  
some time after the accident as from contused  
scalp. or from a wound which has cicatriz-  
ed, the pain occurring days & weeks after  
the accident. — Upon examination of the  
head nothing unusual can be found, the  
injured part has completely healed, but  
it continues to be very painful and

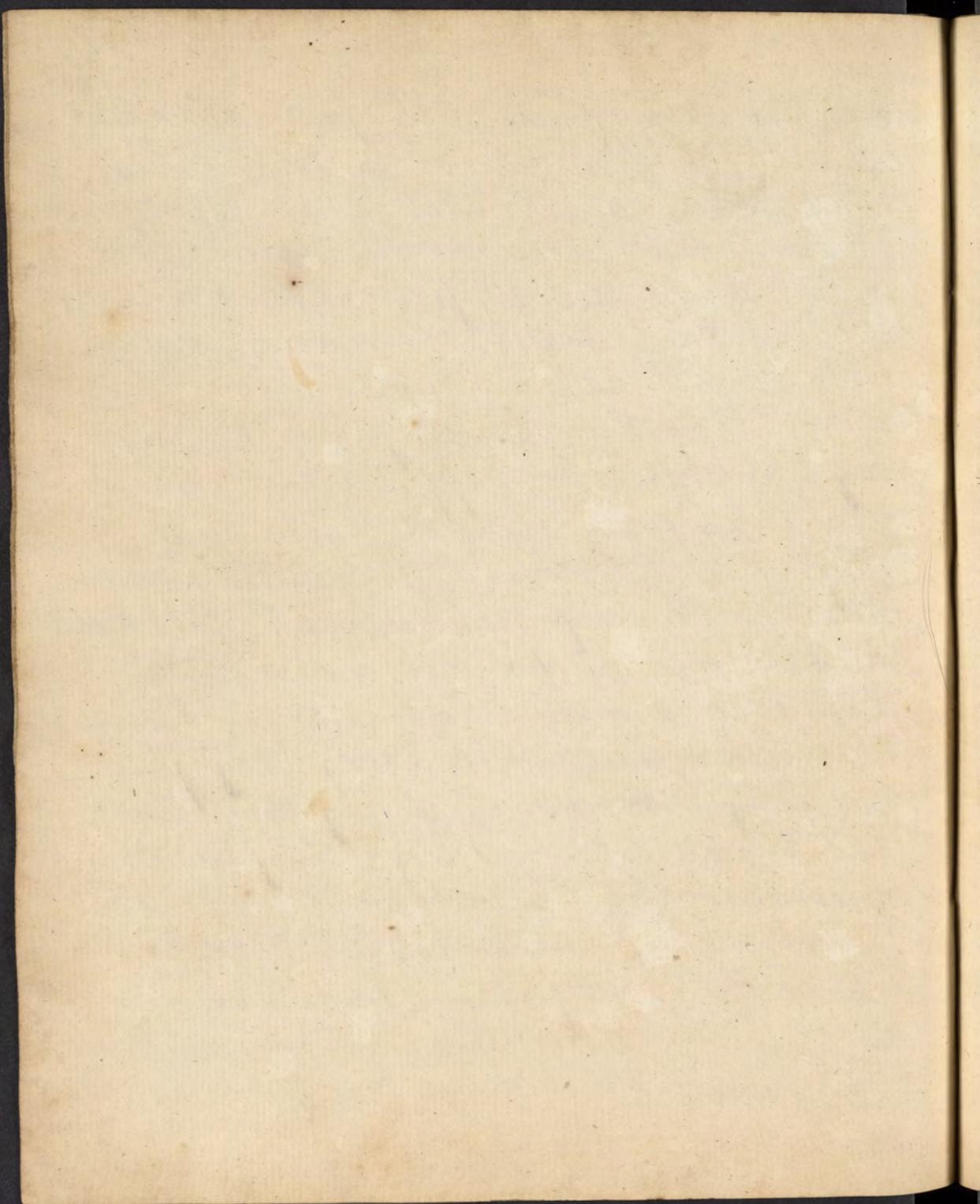


interferes very much with the digestive pro-  
cess. — The first case of this kind I was  
called to see by Dr Rush. —

A Lady had received a contusion on the  
Scalp. She had some pain at the time, but  
nothing very unusual occurred; but the  
pain after sometime began to increase, she  
lost her appetite, her sleep, she became  
very uncomfortable, & applied to Dr Rush  
who tried every thing he could think of.

Upon examination I found nothing unnor-  
mal in the Scalp whatever. To see whether  
the bone was affected or whether the division  
of the Nerves would be of service I made  
an incision down to the bone; My patient  
perfectly recovered in a very short time.

The Second Case was also a Lady who had  
received a blow in the head from which  
she recovered, but soon after hurt herself  
on the same part. I recommended  
the incision she recovered & remained well  
for One Month, when it again returned;



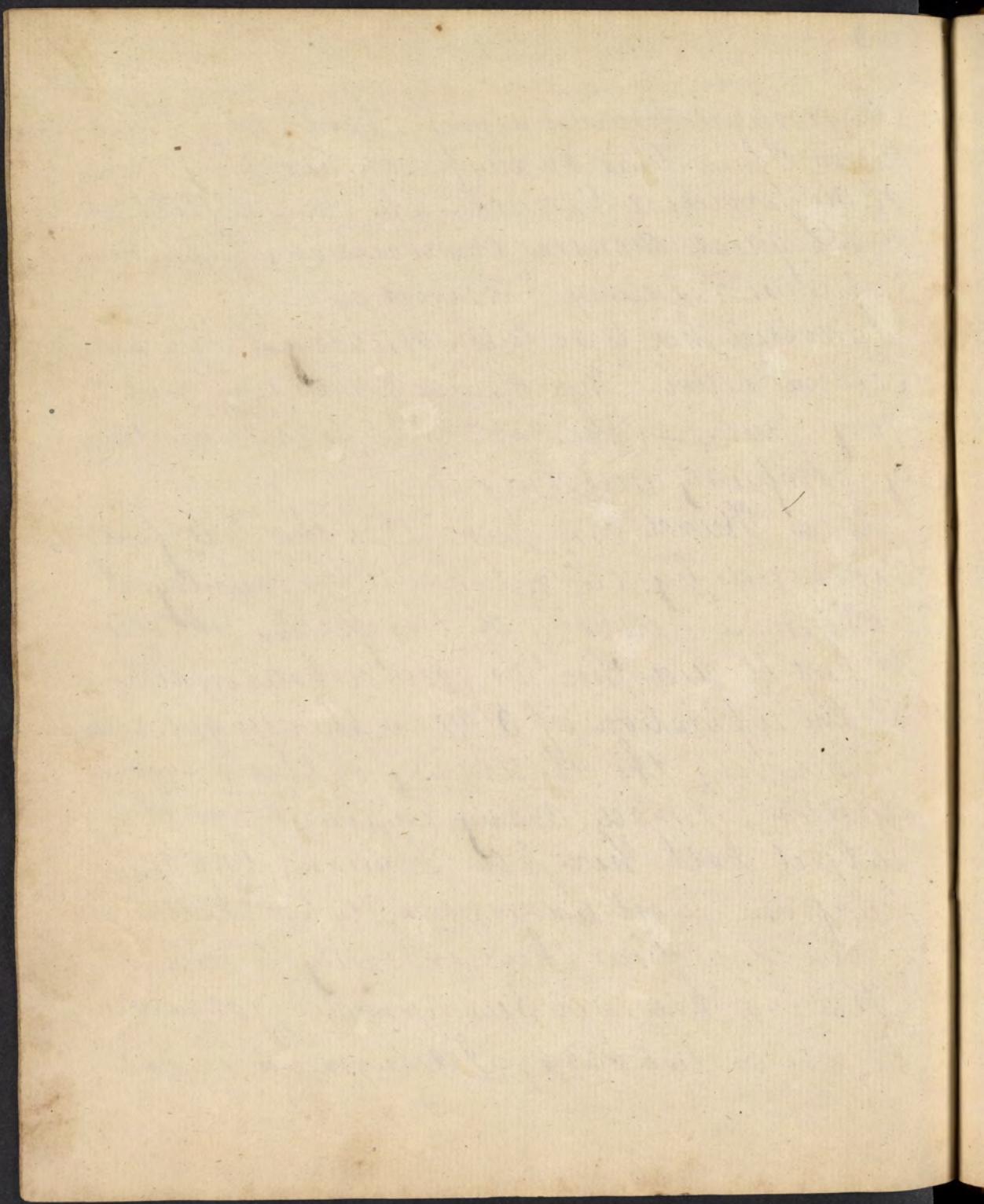
the wound having almost healed up, I made two or three visits on the part, but they were of no service whatever - She was afflicted with great nausea & vomiting, pain, convulsions, fainting & tremors -

I advised her to go to the country - here she became better - Her nausea & vomiting continued very freely - She continued to improve & finally completely recovered.

In a third case being that this last patient recovered by being taken to the country, I advised a removal of this patient - She did so but it did her no good whatever, although at the expiration of 5 years she also got well.

Percceiving the obstinacy of this singular affection, I made many inquiries on the subject both here & in London, but to no purpose, most understood what I alluded to but confessed their inability to cure it.

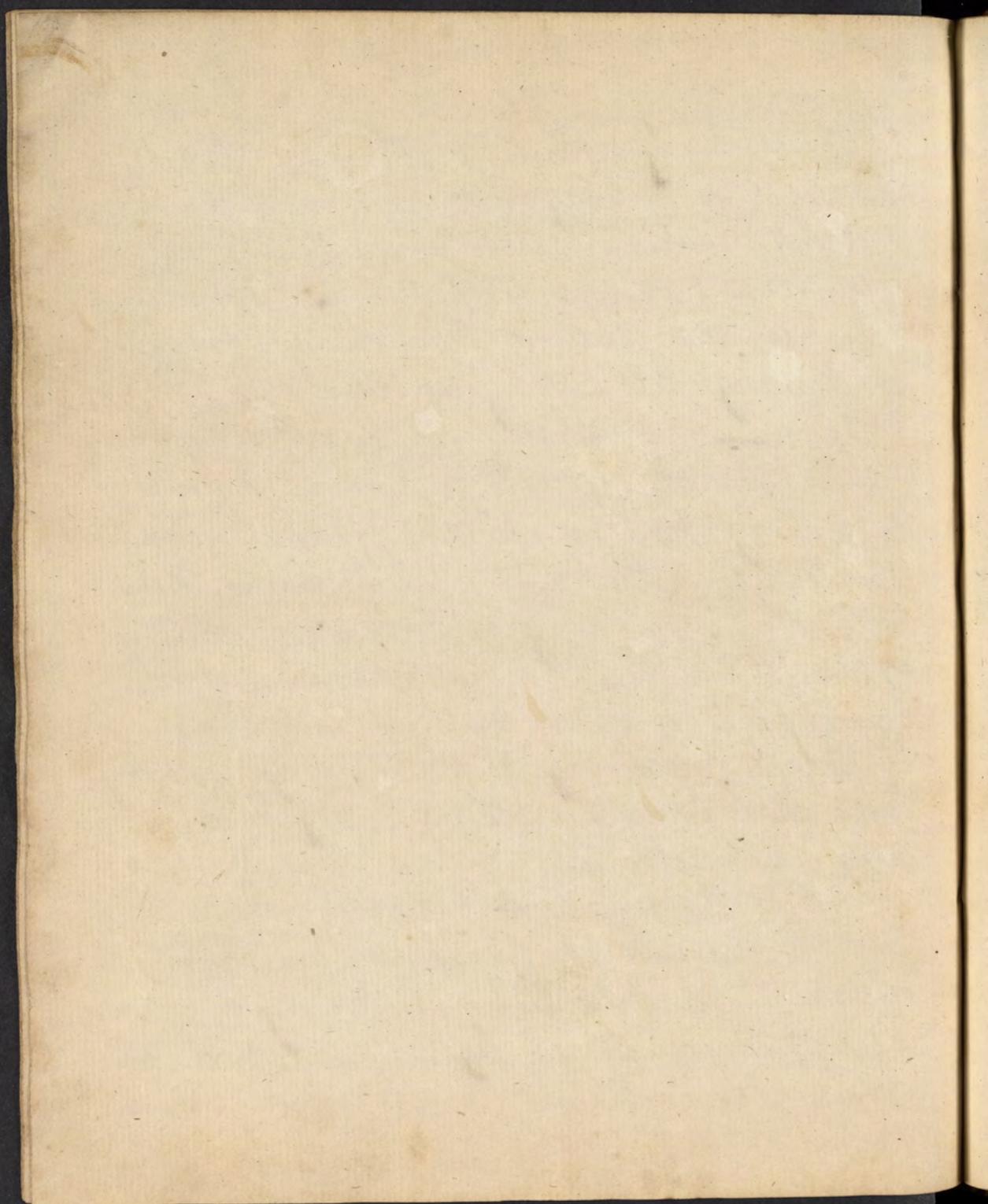
Having however been vomiting of service in one or two cases, I determined in the



must take to try emetics.

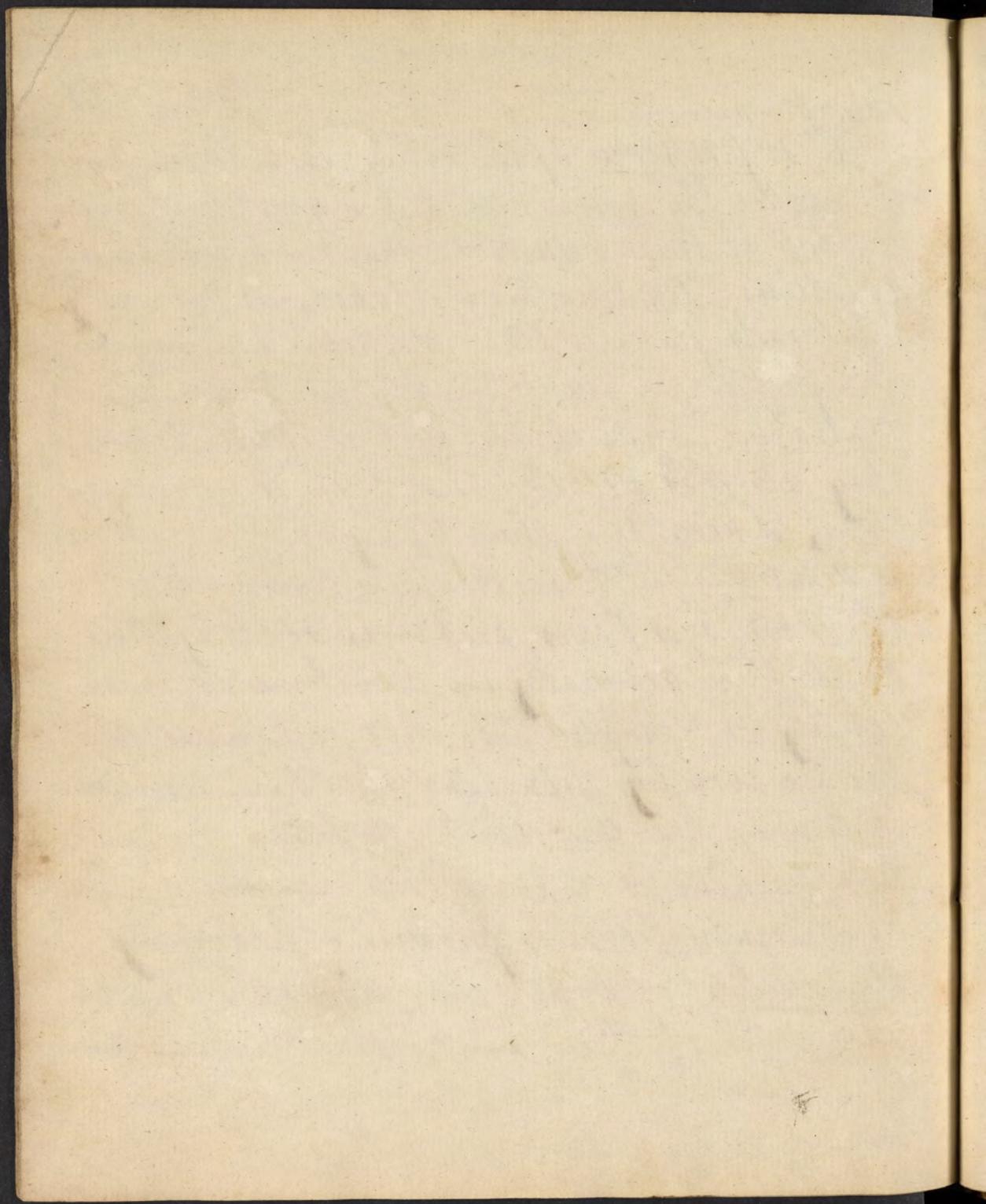
I accordingly exhibited the Tart: Emet. & my patient completely recovered in the course of a week or two. I have tried it in several cases since & always with success. Sometimes however my patient would not continue the remedy till a complete cure was accomplished. — In that painful affection of the face called the tic-douloureux which I think to be a very similar affection to that above mentioned I have also tried emetics, & in two cases they were very beneficial. — I therefore recommend this for your trial, not that my experience has been such as to enable me to speak positively of the efficacy, but they have been more successful in my hands than any thing else. —

We have now to consider the injuries which interest the parts within the cranium. These parts are affected either by compression being produced or by a foundation being made for inflam<sup>n</sup>. of the brain or its



Compression of the brain in a slight degree is marked by giddiness when greater there is a loss of Sense & Motion, nausea & occasional vomiting, the breathing is laborious & generally Stertorous pulse is slow, depressed & laboured The pupi<sup>s</sup> are sometimes dilated & sometimes contracted, you must not conclude because they are not dilated, that there is no compression; I have seen them fully as often contracted as dilated. — There is often hemorrhage from the Nose, eyes & ears ecchymosis of the eyelids or the face generally. — Sometimes the insensibility is complete, so that he cannot be roused even by pinching the skin; sometimes it is only partial the part being roused by speaking in a low tone.

Compression is produced either by fragments of bone being depressed, or from effusion of fluids — Within the Cranium



on in the substance of the brain.

Whenever, there is a fracture, you have always more or less rupture of vessels, but this rupture often occurs when there is no fracture. — At first in these cases there will be no symptom whatever of compression; the patient will be perfectly sensible & will detail with minuteness the circumstances of the accident, when suddenly he will fall down with every symptom of compressed brain.

I saw this very completely exemplified some years ago in a boy who was struck on the Aspontor; he complained of pain at the point but he was in every other respect perfectly well. — I was sent for and found him relating with minuteness how he had been injured, while I was there he fell down insensible, the attendants thought him dying, and objected to my doing any thing.

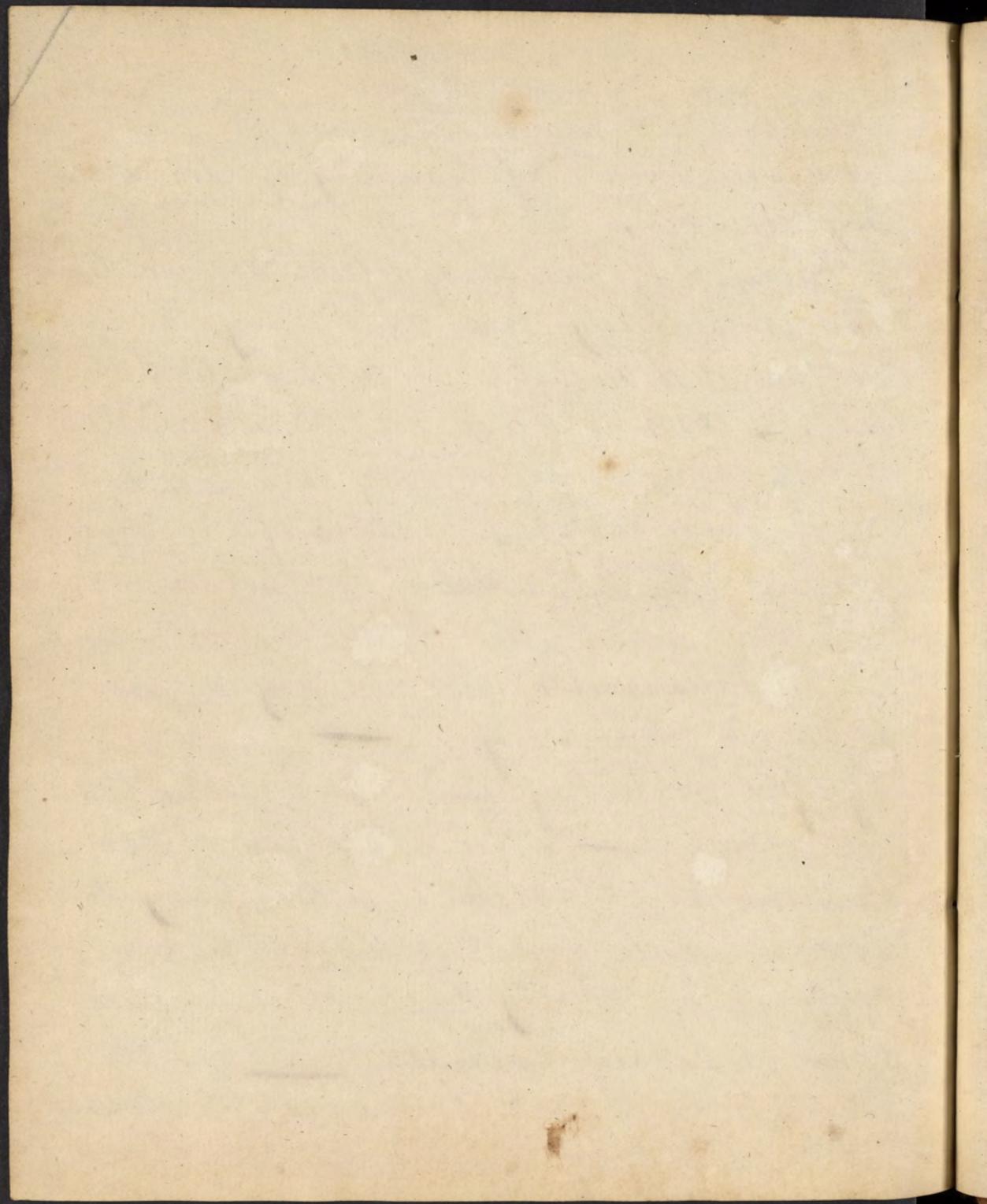
go see can

But I insisted upon perforating the bone, and evacuated a large quantity of blood & the Boy recovered, —

Therefore when compression does not take place immediately, you must always remember that it is owing to an extravasation of fluid. — I am however glad to inform you, that the bone will not only be cracked but also in some instances portions of it depressed without any symptoms of compression —

In other cases, also, where there is no wound of the Integuments, nor even any marks of contusion on the Scalp. —

Symptoms of compression from effused fluids while alive. — Now in all cases of compression of the Brain it is necessary to trepan — but you must never make a perforation merely to elevate depressed bone, or because there is a crack in the bone — there should be marks of compression

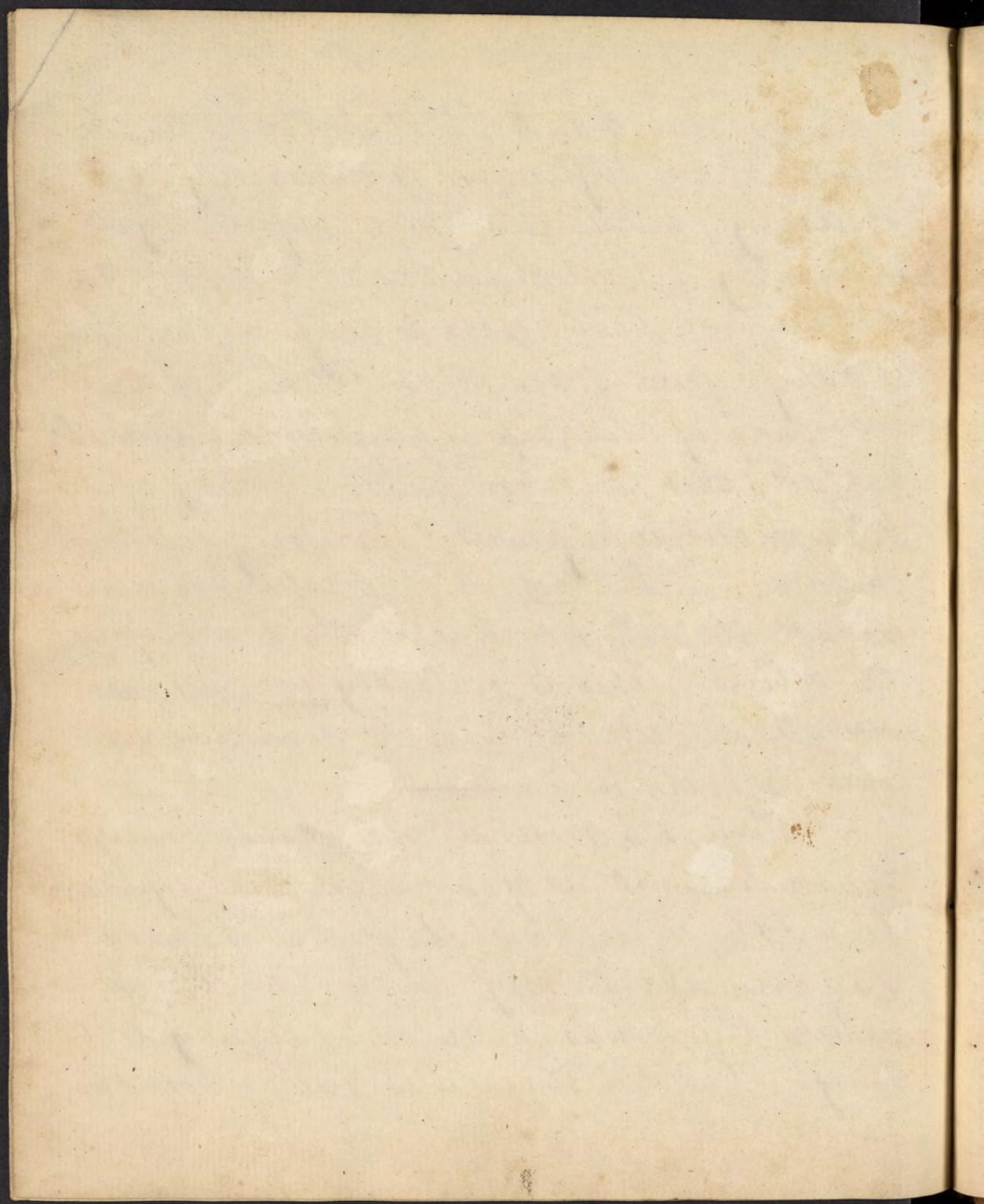


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of the Brain I know, that Mr. Pate states the  
Result of his experience to be directly the  
Contrary; but in this, he is opposed by Mr.  
Abernethy & most of the modern Surgeons.—

When you have reason to suppose that there  
is Compression from effused Blood, & there is  
no injury of the Scalp to quiete you, you shd.  
suspect, that the large middle artery of the  
Dura Mater is ruptured & therefore perforate  
the bone in the tract of that vessel & if you  
do not find the effusion on one side perforate  
the other.— This is certainly an uncertain  
operation, but I conceive it would be your  
duty to perform it.—

There is a mistake you should always  
guard against, as you value your reputa-  
tion & the welfare of the patient.— I have seen  
One Case Dr. Dorsay another, in which  
nobody there was no external injury to the  
Scalp, but the Surgeon is feeling over the



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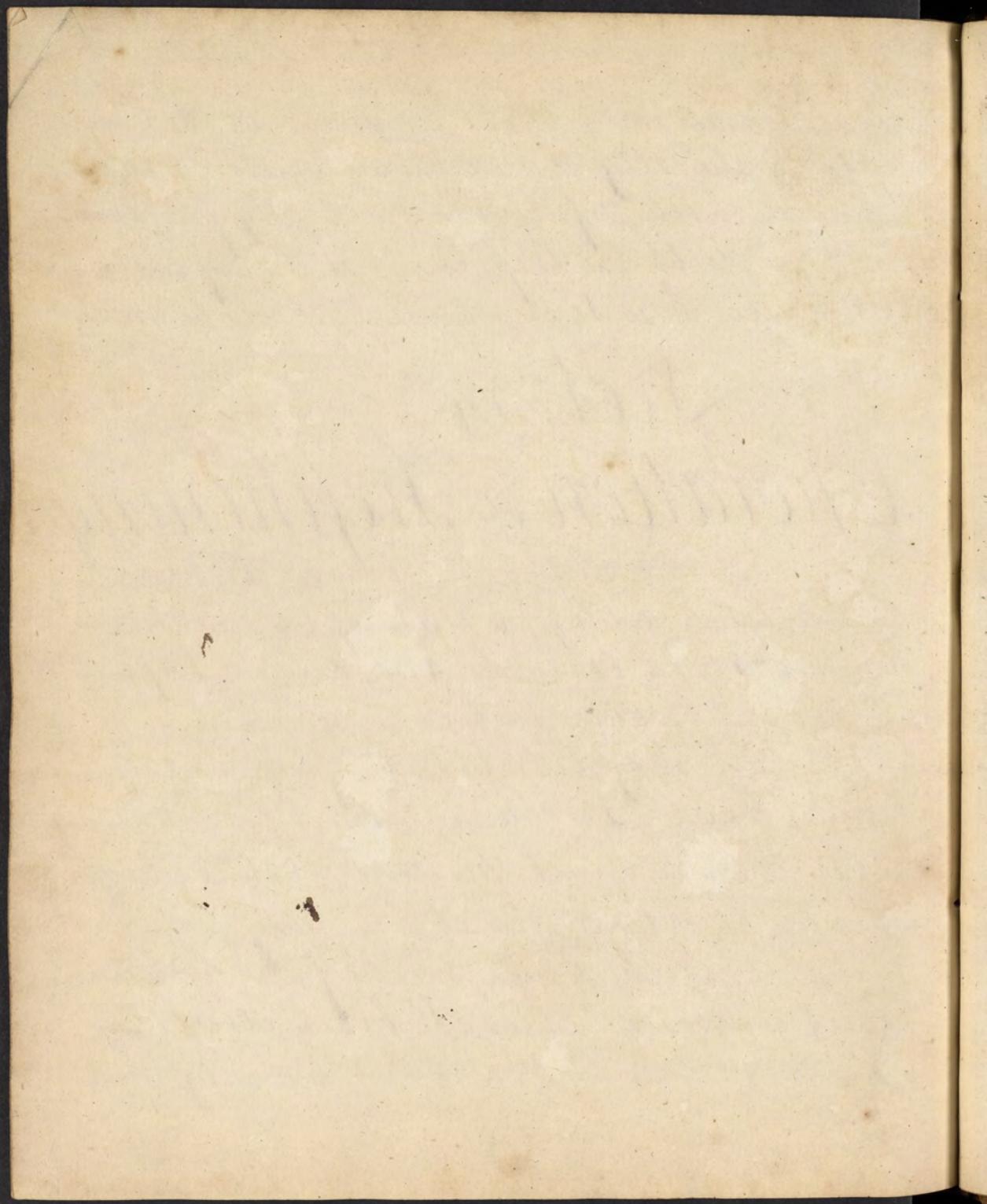
he did perceive a slight unevenness of the bone, which naturally existed there, mistook it for fracture with depression & actually perforated the bone with the trephine. It is very difficult to conceive how such a mistake could be made

Sect. 34<sup>th</sup>

## Operation of Trephining

The operation of Trephining consists in removing a piece of the Cranium by means of a circular saw, called a "Trephine". I prefer the Trephine which is cylindrical & has an edge only serrated - in preference to the conical one. In cutting through the integument when there is much fracture of the bone you should be cautious, as it is a very possible thing, that the knife might pass between the fragments & enter the brain itself.

I do not advise you to cut timidly but

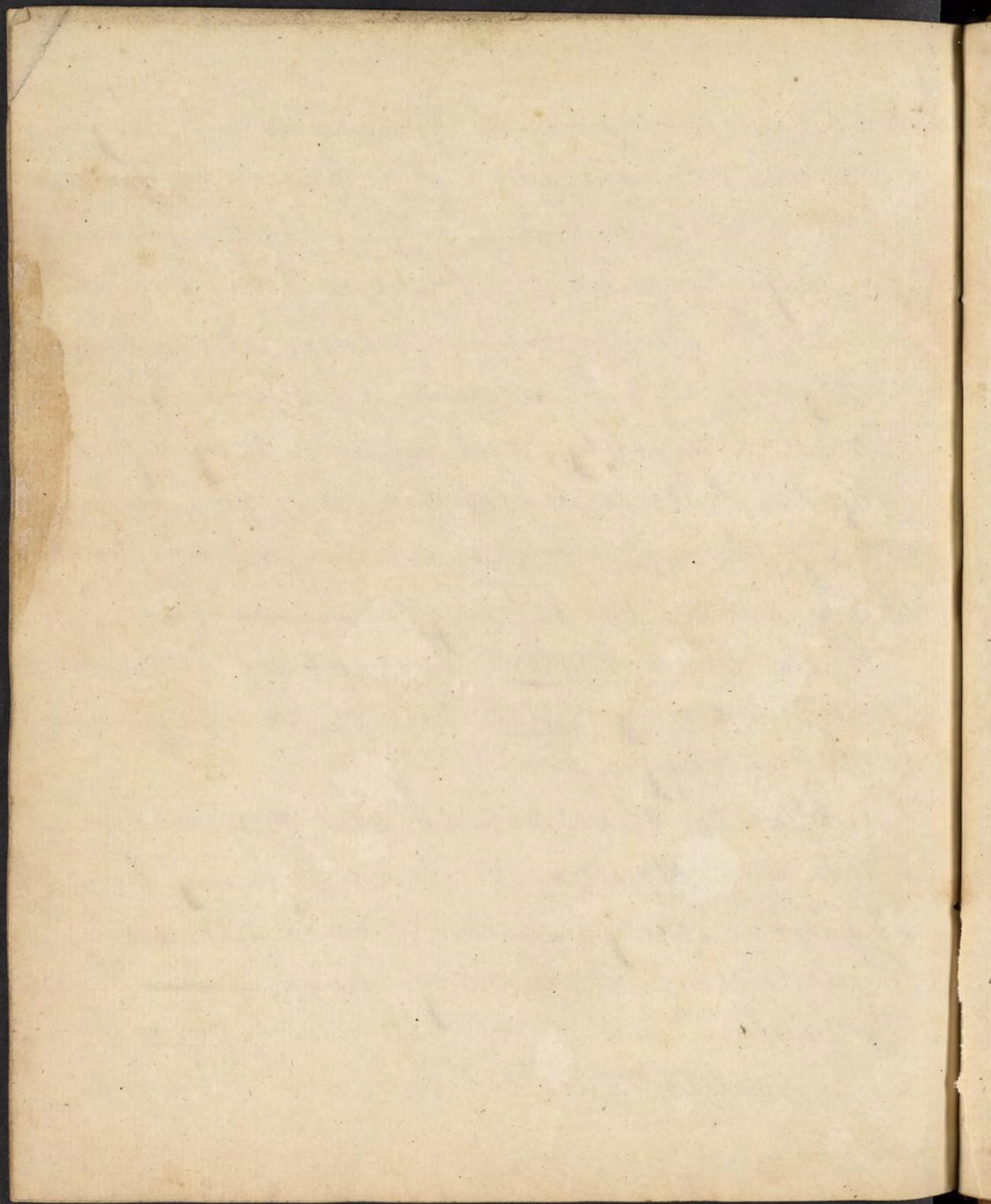


with caution, when the fragments are very numerous & comminuted, it is best to cut down upon the Dura Mater & pass a director under the Scalp covering the fracture & then divide it. — In perforating the bone, act also cautiously, do not be anxious to perform the operation quickly, but examine very repeatedly the depth to which you have gone & when nearly through — break out the point as this is always the safest plan. —

If the Dura Mater be wounded, it is almost inevitably fatal I never knew an instance to the contrary. —

After the operation the best dressings is a common poultice as it can be easily be applied & easily removed, and it allows any fluid to escape from the opening. —

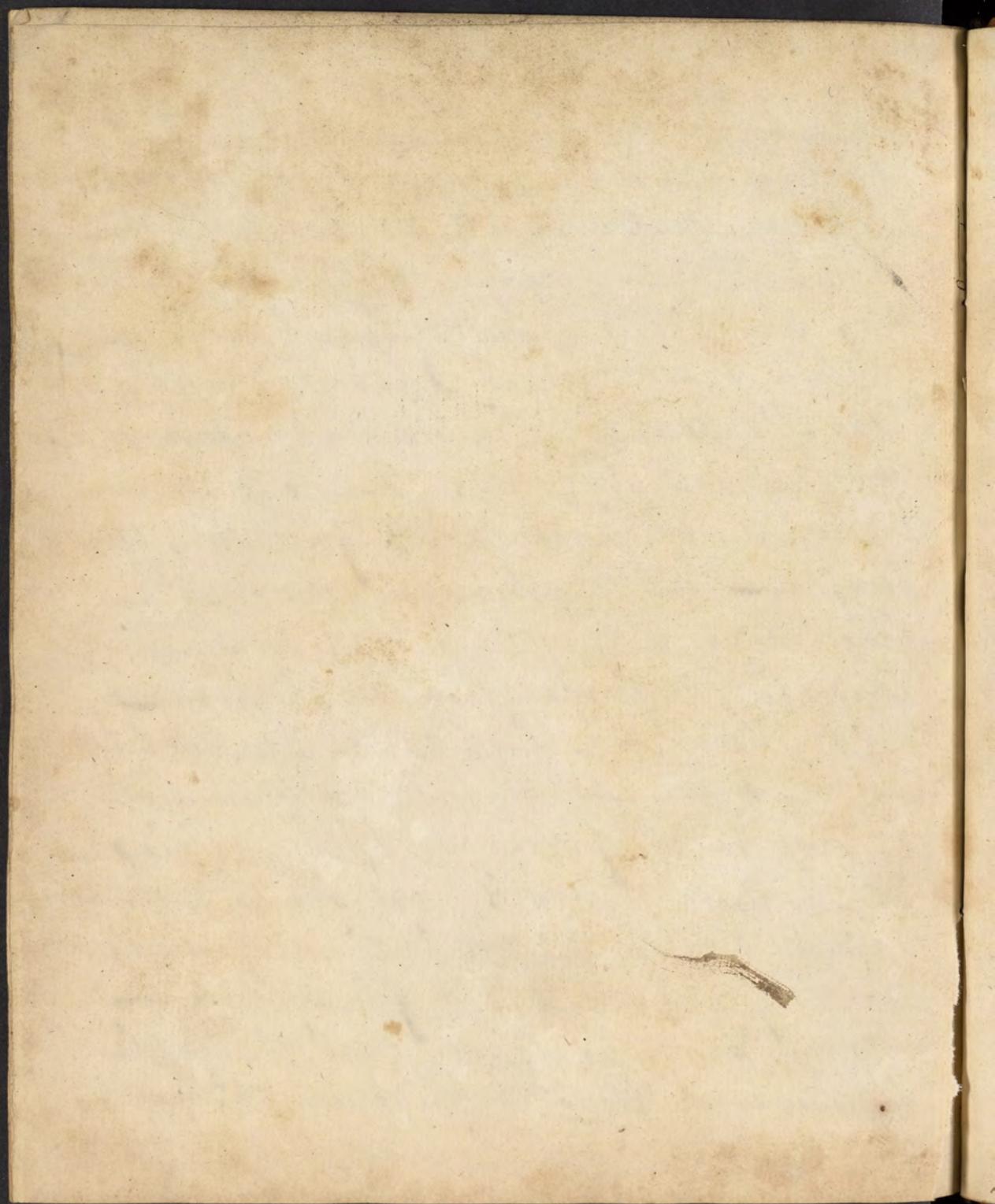
Sometimes there is no effusion between the Dura Mater and the bone, but between



In such cases the question arises whether the dura mater should be punctured for its evacuation or not. By puncture it is very dangerous, I has always been fatal in those cases which I have witnessed.

The Marks of effusion under the dura mater are the following; when there is no effusion under it, the dura mater presents a flat surface - but in other cases it is convex - presenting a spherical surface protruding through the perforation in the bone - I have seen it as high as the external table of the skull. - In such cases also you cannot see the pulsation of the arteries of the dura mater. Moreover the natural falling & rising of the brain, dependent on respiration is not perceptible -

Some surgeons direct, that when the effusion is fluid a puncture shd. be made.

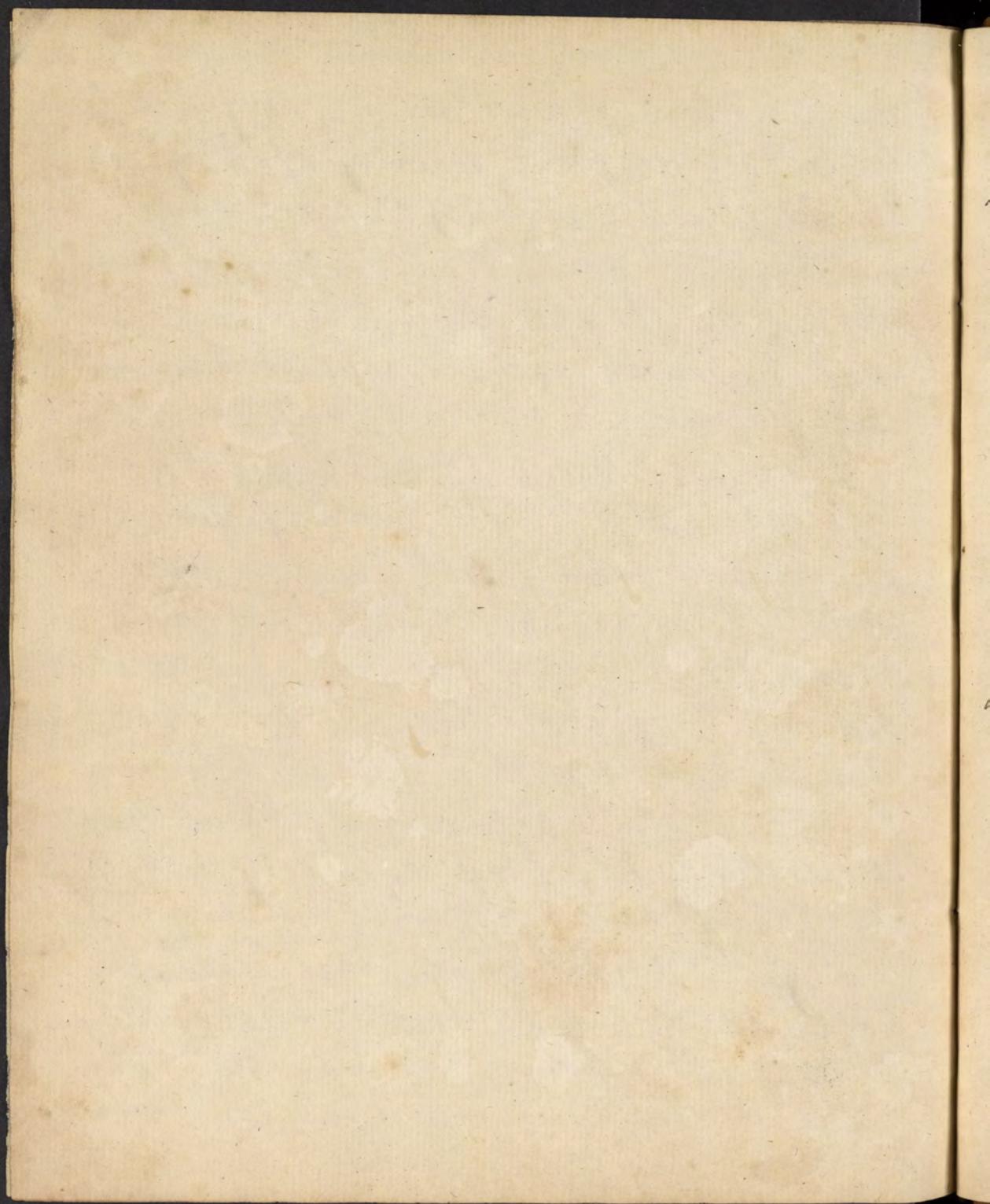


this direction, I think, should only be followed where there is great severity of the symptom, as it is almost inevitably fatal.

If however, you are not immediately called & do not see the patient for several hours, you may suppose the blood coagulated & you must never puncture under these circumstances.

This is not allowing speculation. — I have had a case of a patient with symptoms of compressed brain, with fracture of the bone — I perforated the bone & raised the fragments, the patient was somewhat relieved but in a very short time the dura mater was elevated & pushed thro' the aperture.

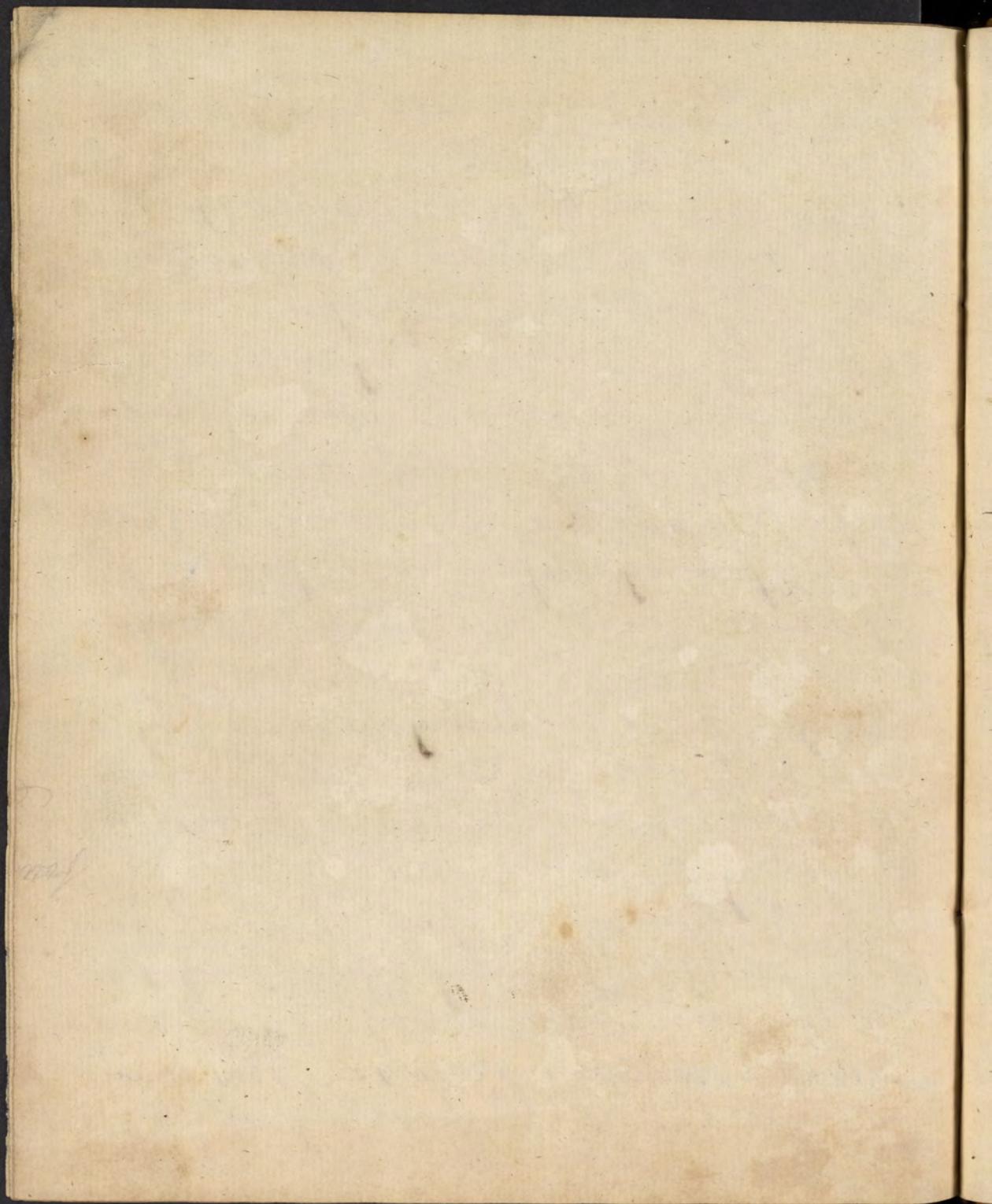
Instead of puncturing it, I kept him perfectly quiet, bled him very profusely generally "ad deliq<sup>m</sup> Animi" & often 4 times a day. — I first applied Colic to the head & then enveloped it with a blister. By these with other auxiliary means my patient recovered. But judging from



what I have seen he would have died if the  
picture had been made.

Sometimes the large Middle Artery of the  
dura Mater is wounded & continues bleeding.  
Now it would be very improper to secure  
this in the usual manner by the Needle & ligature  
as the ligature would be a seton in the dura  
Mater, keeping up constant irritation.—  
In preference to this, the hemorrhage should  
be stopped by keeping gentle pressure on it  
by a succession of assistants, but a still pre-  
ferable method is to press the trunk of the  
Artery against the artery Cranium, by in-  
troducing a small piece of lint between  
the dura Mater & the bone in the course of  
the Artery.

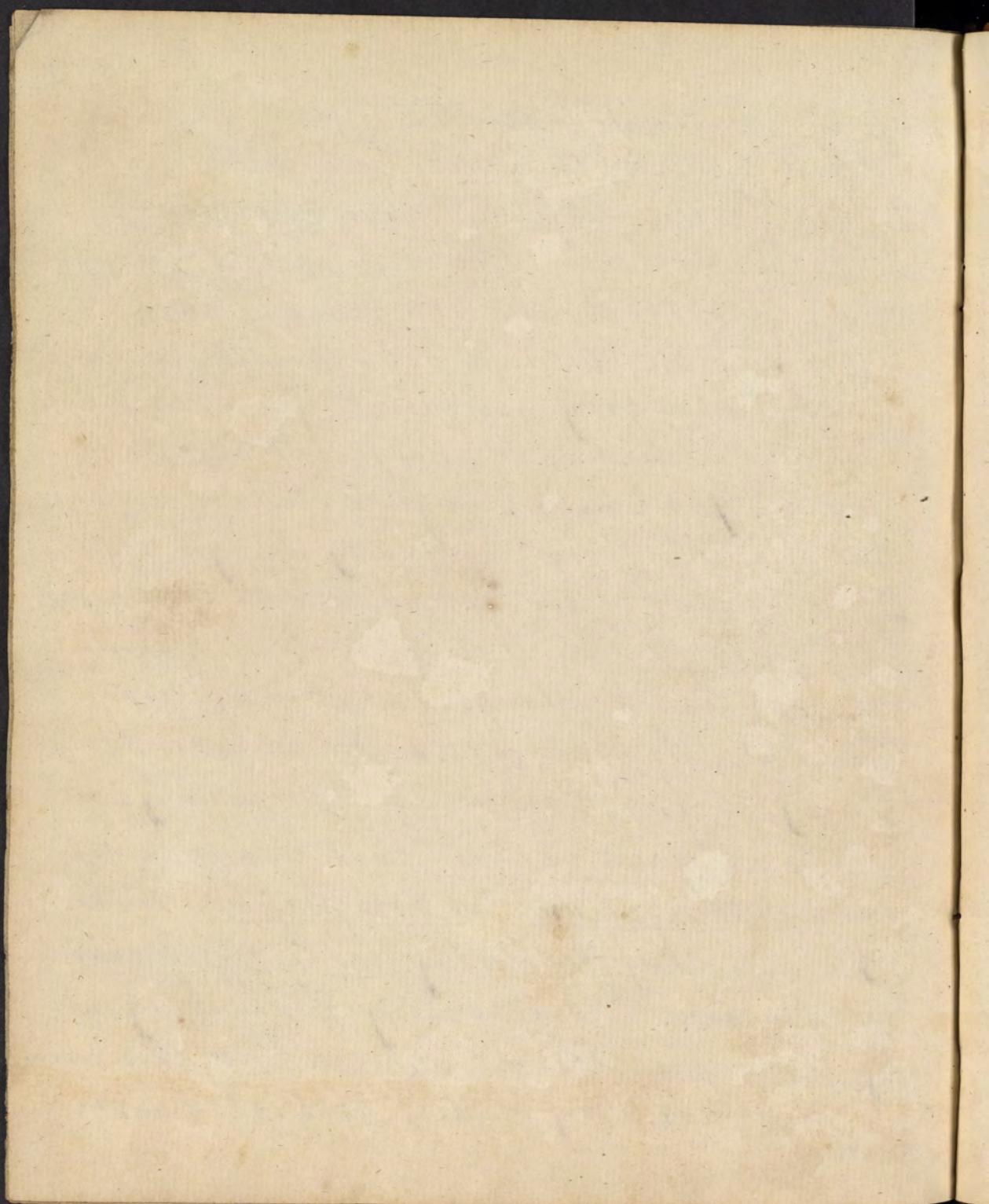
If the sinuses are opened hemorrhage is  
very easily stopped by a pledge of Lint—  
Sphur is another state of the dura Mater,  
which sometimes occurs.—Sphur is a  
bruised state of the part by which its



life is sometimes destroyed.

I have a case of this kind in a child, who had a fracture of the frontals after having prepared the bone, I noticed an unusual appearance of the aura matter, exactly resembling a bruise - the child in some measure recovered & I had very sanguine hope of its complete restoration to health. - At the expiration of 7 or 8 days, the part thus circumferenced began to loosen & actually decayed off. Suppuration of the brain was the consequence & the child died - Now in such instances nothing can be done, but it is well to know it, so that you need not be too hasty in prognosticating favourably -

Please on your genera<sup>l</sup> that you do not take intoxication for compression of the Brain - they have very many symptoms in common, but generally can be very easily distinguished. - A mistake of this kind fell under my notice several years ago



in Edinburgh.

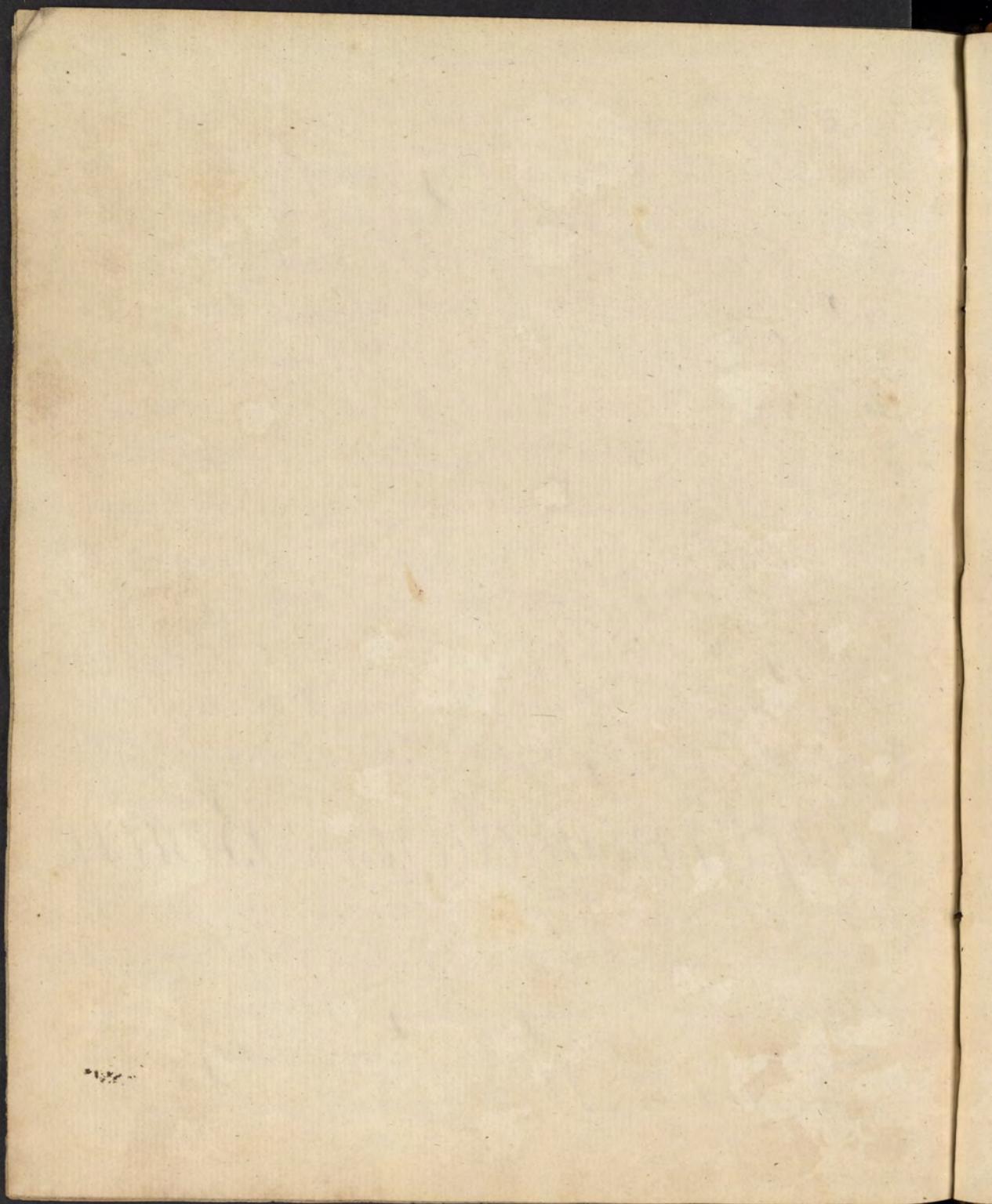
A Hostler became very much intoxicated and in that situation roent among his horses, one of which kicked him on the head. —

About midnight he was taken to the Hospital, the Surgeon was called & it was determined to trepan him, from some circumstance however, it was put off till the morning; in the interim the patient recovered from the effects of his inebriating draught, & learning what the Surgeon contemplated quickly walked off with himself. Remember this Always notice the breath of the patient & get the history of the accident if possible.

## INFLAMMATION of the BRAIN

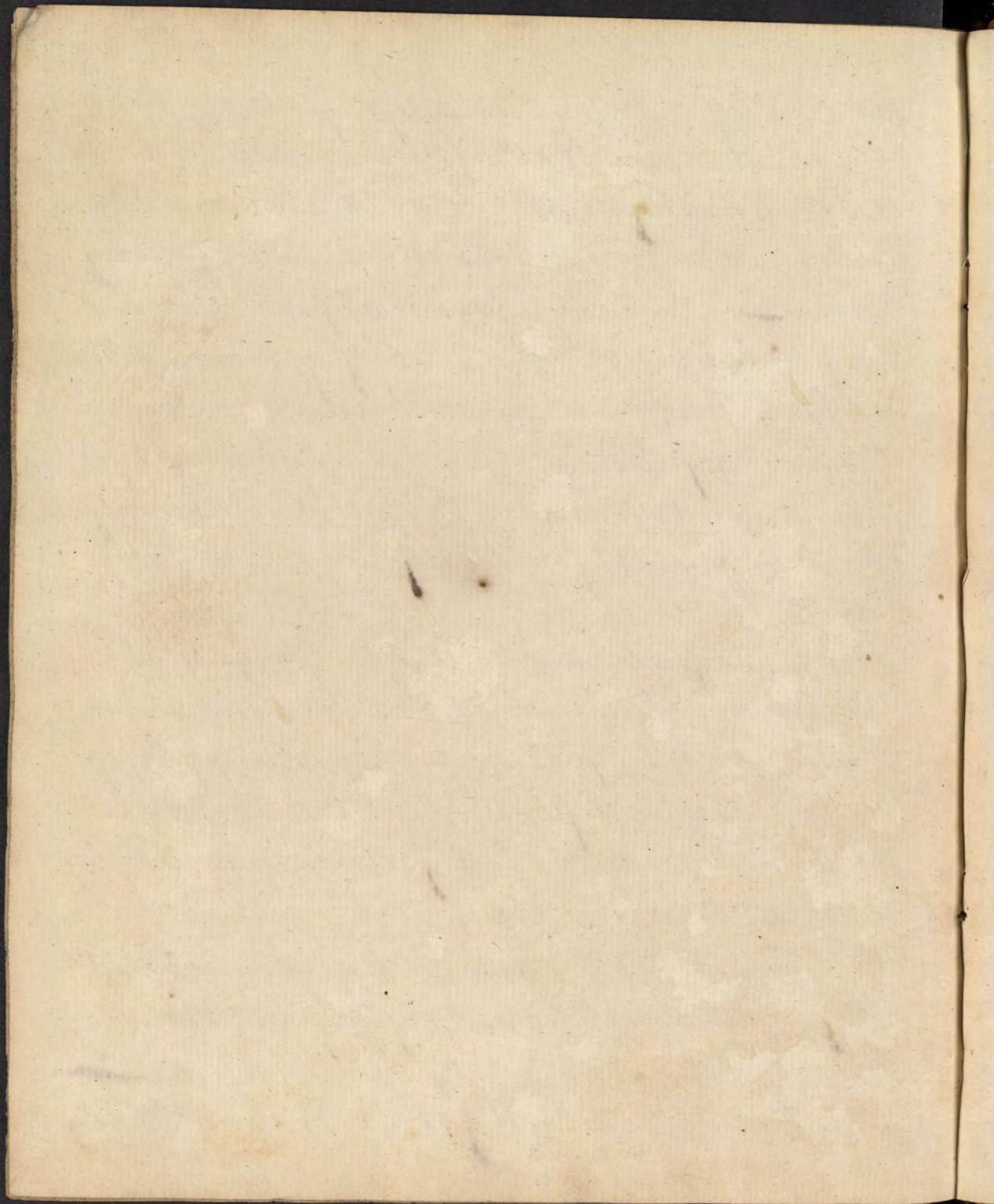
After the several accidents, enumerated, inflamm<sup>n</sup> of the Brain or its Membranes is very likely to occur. —

This does not appear immediately, but after several days. — The patient at first becomes



ing restless; She has no sleep, pulse is sharp & frequent, face hot & flushed, eyes red, there is occasionally, sickness of the stomach & vomiting, chills, vertigo, delirium, & finally coma, — These symptoms appear from simple Contusion of the Scalp, from a wound without fracture — from fracture with one without depression & from Concussion of the brain. — In cases of Contusion of the Scalp however well the part may appear at first it will become tumid, not hot & inflamed, there is no pain, but it is soft & fleshy as if it contained a fluid — If this tumour is opened, a thin serous will be discharged, the Scalp will be found separated from bone distance, the bone denuded of its periosteum and of a white colour. —

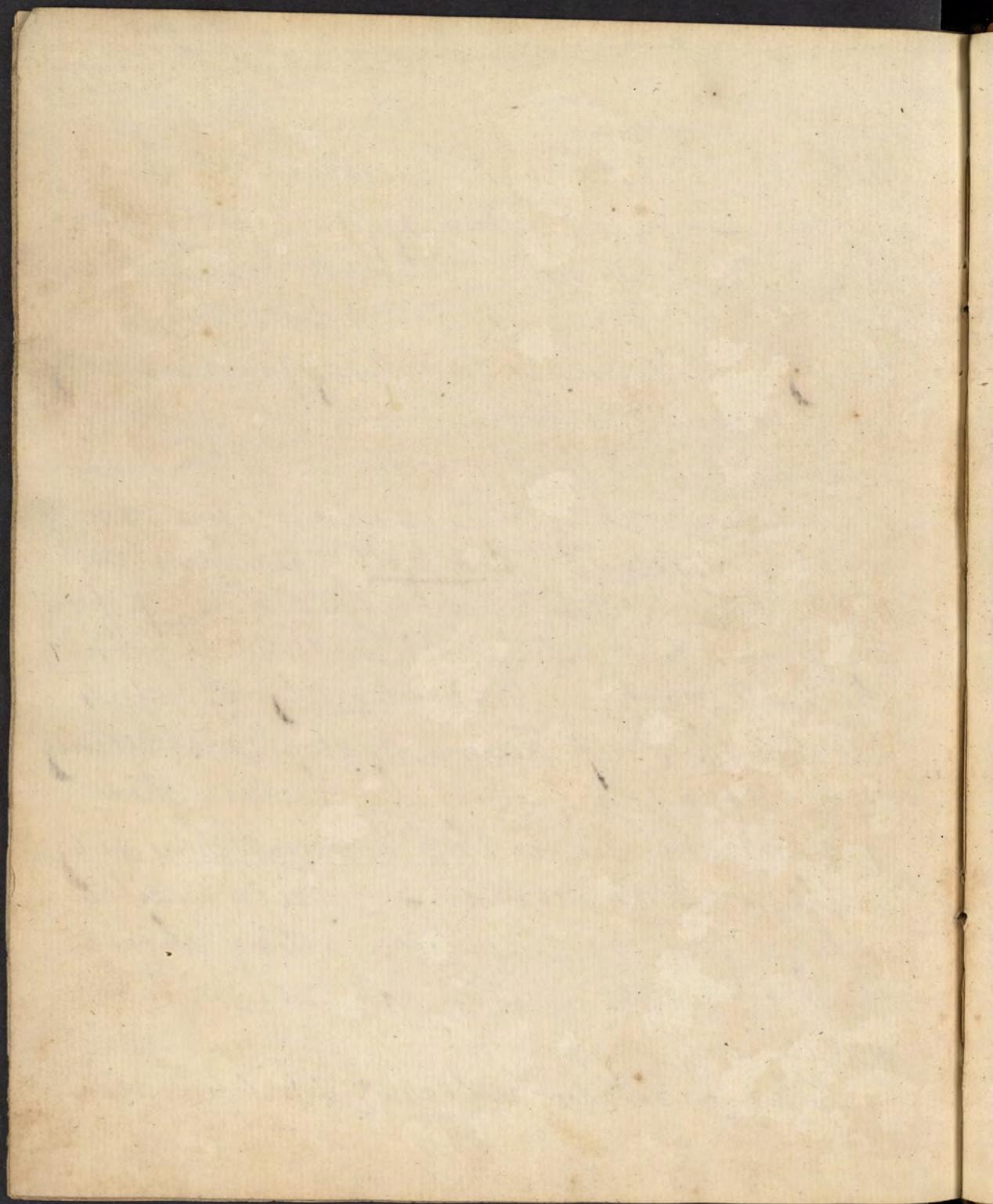
If there be a wound however well it may, at first inflam & suppurate, & however healthy its granulations will appear — In a short time, they will become glabrous



Spa<sup>l</sup>, as changing a thin lame — the Scalp  
will also be far more detached for some  
distance. — Now all these appearances show,  
that there is inflam<sup>n</sup> within, because inflam<sup>n</sup>  
cannot take place on both sides of the same  
cavity — it diminishes and disappears externally  
as increased within. —

Now, how is it that inflam<sup>n</sup> of the brain  
or its membranes is produced when there  
is no fracture? Mr. Pott attributes it,  
to the force applied separating the Scalp from  
the bone — at the same time the bone from  
the Dura Mater — the contiguity of vessels  
between the Scalp & Dura Mater being destroyed. —  
But this cannot be the case there  
is no reason under these circumstances why  
inflam<sup>n</sup> should occur. — I should attribute  
it to the force of percussion acting through  
the bone on the membranes & even on the  
brain itself. —

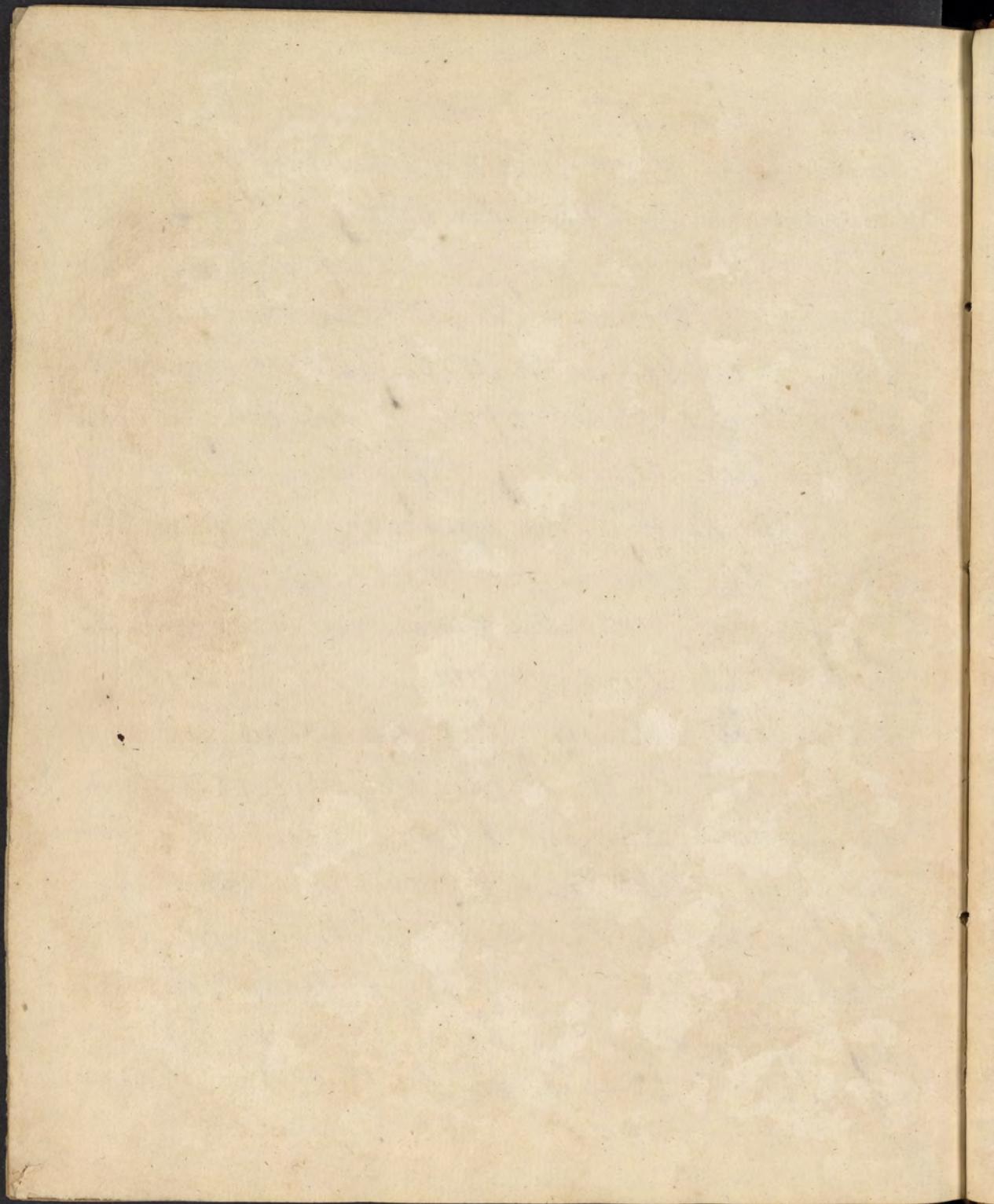
Opis irritates, inflam<sup>n</sup> & suppuration



are the consequences. — Show when this occurs between the dura mater & the bone, proper treatment & an operation may relieve — but when inflam<sup>r</sup>. is deeper the operation will be of no service — In all cases then of Contusion, we should put the patt. on Loco Cict Keep him at rest & free from company, Bleed him generally & topically. —

If the symptoms increase, you must perforate the bone to give vent to the pus which by pressure would otherwise cause ulceration of the dura Matter. —

Mr. Gott advises, that in all cases where there is a crack in the bone — the perforation shd. be made — In this I & numerous other Surgeons, disagree with him & maintain, that the bone is not to be perforated till inflam<sup>r</sup>. has appeared. — When inflam<sup>r</sup>. is induced by Speculae of the bone, Mon or less sup-  
-puration issues, the patt. often appears



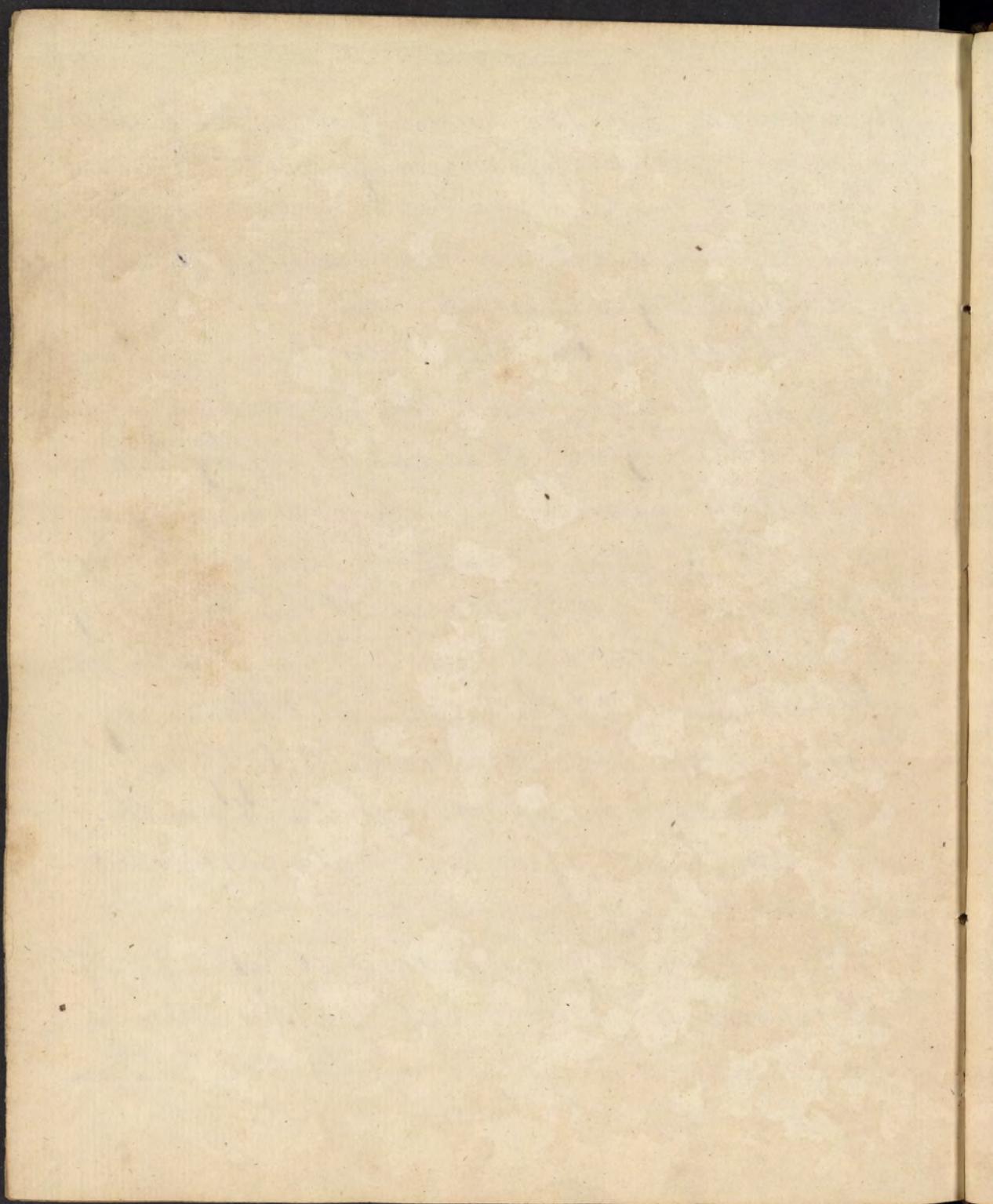
to improve, but the opening of the dura mater increases & a new appearance presents itself.

There is a protrusion of a soft substance forming what is called Hernia Cerebri, which is always very dangerous.

The practice in these cases has been to tie a ligature around the protruding part, so as to destroy it, or to cut it off by the knife.

In these cases the tumour was quickly re-formed & no new advantage was gained by its frequent extirpation. — It was formerly supposed, that this was a new growth from the substance of the brain, but this is impossible, as we have no reason to suppose that any tumour could grow in the same time; in a few hours after extirpation it would become as large as ever.

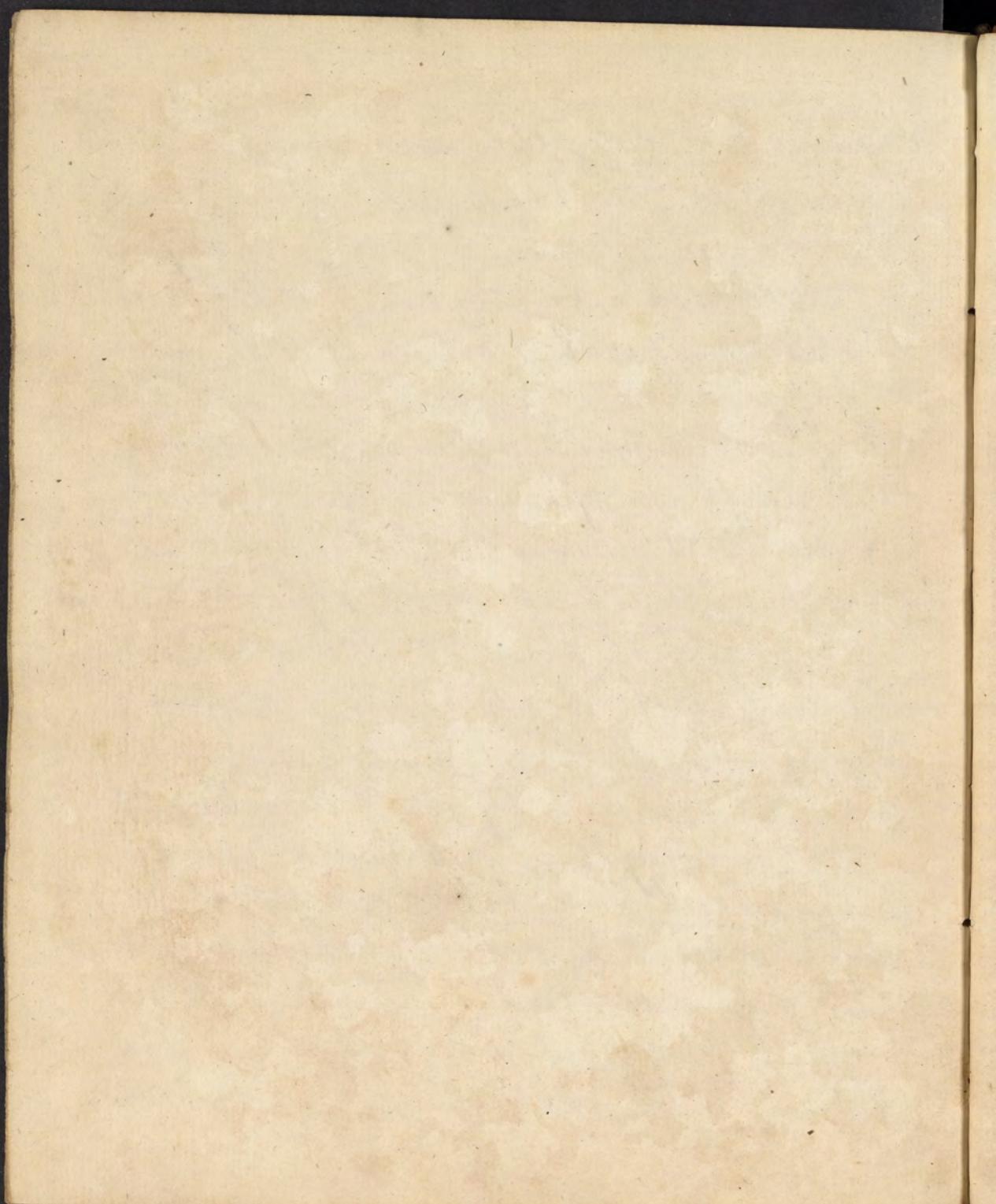
M. Abernethy, considered it as a lump of coagulated blood, but for this there is no foundation. — From dissection I am



maner to believe, that it is a portion of the  
brain itself: As I have been able to trace the  
brain to this tumour. But you may ask  
what should cause the brain to be protruded  
in this maner? I believe it to be owing  
to suppuration in the substance of the brain,  
the pus collecting pressure on the brain & drives  
it, through the opening, in this fungous form.

Now, if I am right in this supposition, it  
will be justifiable to make a puncture, thro'  
a portion of the brain in several directions,  
till we find the abscess & evacuate the pus, I am  
happy to learn, that this has actually been  
done with success by Mr. Hill in England.

Dr. Dorsey also has had a case of  
Fungus cerebri when about the 8<sup>th</sup> or 9<sup>th</sup>  
day a vomiting occurred, the tumour broke  
& the patient recovered. — I would therefore  
make a puncture and introduce a Canula  
for the escape of the fluid. —

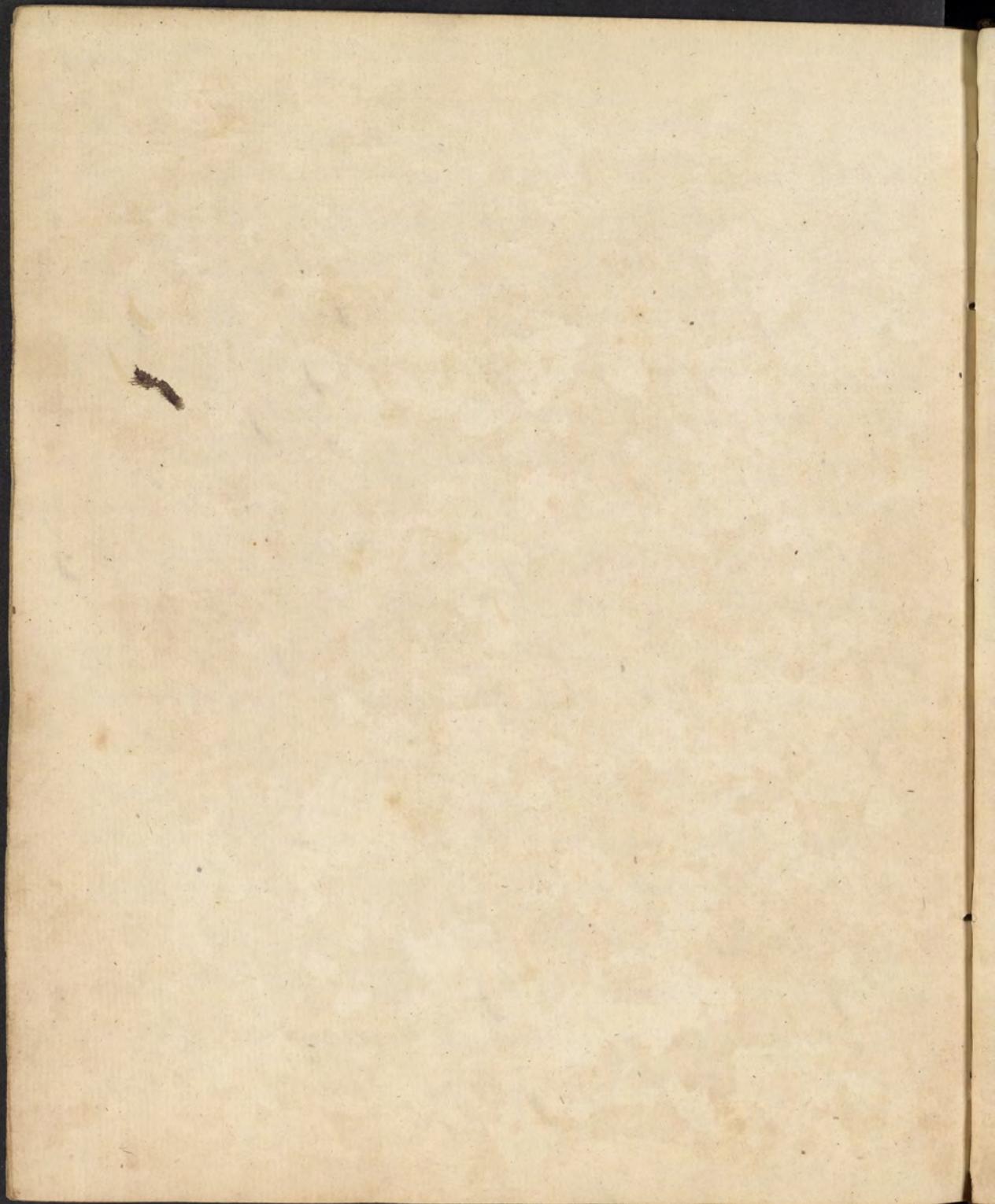


There are many cases on record in which portions of the brain have been removed and yet the patient has recovered.

Upon we cannot satisfactorily account for but they are encouraging & I think may be in some measure explained by the fact, that the pus humor can be freely evacuated. I once had a case of a child, in whom portions of the brain were found on its surface, I removed them myself - I put him on a very low diet, bled him freely, on the 3<sup>d</sup> day he began to grow better & he finally recovered.

I have a case of a child who was kicked by a horse & had a small puncture of the dura mater, knowing the danger of such cases I was anxious to close it - I took this view covered it with the detached integuments & had the pleasure to find that they had united, by which the dangerous consequences of such accidents were avoided.

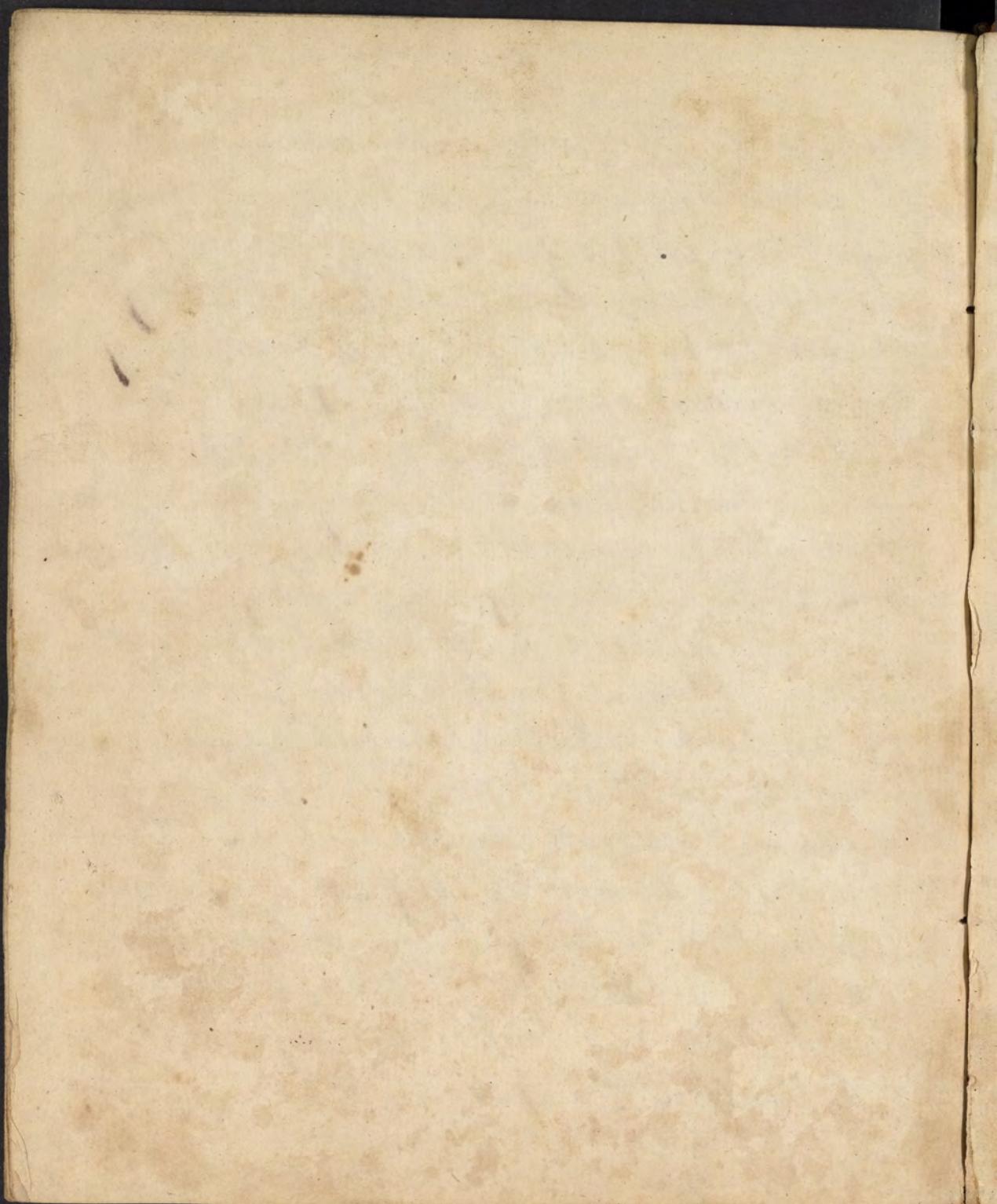
This is the only case which I have



seen, but in all similar cases, so where the wound  
of the membranes is small I would advise the  
desuetude of this practice.—

Although inflamm. of the brain usually  
occurs in 10 or 12 days, yet it sometimes ap-  
pears Weeks & Months, after — I have known  
it at the end of 6 months & in one case 12 months  
after.— On this account the Antiphlogistic treat-  
ment is to be continued, not only till the sym-  
ptoms abate but till they are completely removed.

One of those cases I will relate to you— Capt<sup>n</sup>  
Turner while at sea received a small blow  
on his head which disabled him for a con-  
siderable time but he recovered in a great  
measure without much attention.— There  
remained a tumor on the part — this after-  
wards became very painful, was consider-  
ed by a surgeon in Philadelphia as a vi-  
neral node & the part was kept under  
a salivation for 4 months, & had leeches



applied to it, with various other treatment  
all to no purpose - He went to England  
where he was again put under a Mercurial  
Course upon the same supposition. He came  
afterwards to this City on his passage he  
had several fits & also a constant number  
of the left Arm & Leg - He afterwards lost the  
use of these limbs - He was put under the  
care of Dr Rush who bled him freely &  
being called in, I promised an incision  
to examine the Cranium - He found the  
bone very rough & thick which leading to  
the supposition that there was mischief  
within, the next day we trephined him  
I found a little pus on the dura mater, very  
little however - He soon after died, upon  
examination the dura mater was found  
to be an inch thick & under it  
there was a little pus.

БИБЛІОТЕКА  
ДЛЯ  
АМЕРІКАНИ

